

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

30-Jun-05 11:19 AM

PRODUCTION COMPONENTS

SUMMARY OF RESULTS

DEVELOPMENT OF RATE BASE

1	Gas Plant in Service	19,206,515	13,396,095	105,241	0	1,637,432	2,428,732	953,443
2	Less: Depreciation Reserve	7,687,909	5,363,759	42,942	0	655,365	970,545	380,928
3	Net Gas Plant in Service	11,518,606	8,032,336	62,299	0	982,066	1,458,187	572,515
ADD:								
4	Cash Working Capital	1,494,599	1,109,385	59,777	1	136,231	97,542	31,753
5	Materials & Supplies	0	0	0	0	0	0	0
6	Total Additions to Net Plant	1,494,599	1,109,385	59,777	1	136,231	97,542	31,753
DEDUCT:								
7	Deferred Taxes	2,136,918	1,490,859	11,915	0	182,166	269,813	105,901
8	Unamortized Pre-1971 ITC	284	198	2	0	24	36	14
9	Customer Contributions	0	0	0	0	0	0	0
10	Customer Deposits	0	0	0	0	0	0	0
11	Unclaimed Checks	23,498	17,881	879	0	1,949	1,484	512
12	Total Deductions to Net Plant	2,160,701	1,508,938	12,796	0	184,139	271,333	106,427
13	Total Rate Base	10,852,504	7,632,783	109,280	1	934,158	1,284,396	497,840

DEVELOPMENT OF RETURN

14	Revenues from Sales of Gas	338,914,239	230,848,852	6,046,507	2,349	22,259,198	35,408,497	15,643,522
15	Other Operating Revenues	916,888	311,206	2,271	0	194,912	220,144	70,676
16	Total Gas Operating Revenues	339,831,128	231,160,058	6,048,778	2,349	22,454,110	35,628,641	15,714,198
LESS: OPERATING EXPENSES								
17	Operation & Maintenance Expense	337,800,216	229,667,813	6,065,056	2,348	22,299,218	35,373,488	15,625,486
18	Depreciation & Amortization Expense	790,280	552,024	4,744	0	67,344	99,113	38,870
19	Taxes Other Than Income	291,729	204,235	1,981	0	24,843	36,132	14,148
20	Interest on Customer Deposits	0	0	0	0	0	0	0
21	Income Taxes	248,082	201,407	(10,260)	0	13,914	32,321	8,297
22	Total Operating Expenses	339,130,307	230,625,479	6,061,521	2,349	22,405,320	35,541,054	15,686,800
23	Operating Income	700,820	534,579	(12,743)	0	48,791	87,587	27,398
24	Rate of Return	6.46%	7.00%	-11.66%	11.24%	5.22%	6.82%	5.50%
25	Index Rate of Return	1.000	1.085	-1.806	1.740	0.809	1.056	0.852

Bay State Gas Company
D.T.E. 05-27
Attachment AG-22-44(1)
Page 188 of 322

BRK6.xls COST OF SERVICE

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

30-Jun-05 11:19 AM

PRODUCTION COMPONENTS

DEVELOPMENT OF RATE BASE-2

GAS PLANT IN SERVICE

INTANGIBLE PLANT

		ALLOC	TOTAL COMPANY	RESIDENTIAL HEATING R-3 & R-4	RESIDENTIAL NON-HEATING R-1 & R-2	OUTDOOR LIGHTING	HIGH WINTER LOW ANNUAL G-40 & T-40	HIGH WINTER MED ANNUAL G-41 & T-41	HIGH WINTER HIGH ANNUAL G-42 & T-42
1	301 Organization	PLANT	112,837	78,701	618	0	9,620	14,269	5,601
2	Adj Organization	PLANT	(95,294)	(66,465)	(522)	(0)	(8,124)	(12,050)	(4,731)
3	Total Account 301		17,543	12,236	96	0	1,496	2,218	871
4	303 Misc. Intangible Plant	LABOR	1,320,439	927,892	10,718	0	112,319	160,072	62,512
5	Total Intangible Plant		1,337,982	940,128	10,814	0	113,815	162,291	63,383
PRODUCTION PLANT									
6	304 Land & Land Rights	DEMLNG	188,664	131,440	959	0	16,090	24,005	9,431
7	LNG Related	DEMLPG	73,469	51,185	373	0	6,266	9,348	3,672
8	LPG Related	PLT304L	32,458	22,613	165	0	2,768	4,130	1,622
9	Total Account 304		294,591	205,238	1,498	0	25,124	37,483	14,726
10	305 Structures & Improvements	DEMLNG	799,649	557,108	4,065	0	68,196	101,746	39,972
11	LNG Related	DEMLPG	463,249	322,741	2,355	0	39,507	58,943	23,156
12	LPG Related	PLT305L	428,534	298,555	2,179	0	36,547	54,526	21,421
13	LNG & LPG Related		1,691,431	1,178,404	8,599	0	144,250	215,214	84,549
14	Total Account 305	DEMLPG	3,098,342	2,158,585	15,751	0	264,235	394,227	154,876
15	311 L.P. Gas Equipment	DEMLNG	412,449	287,349	2,097	0	35,175	52,479	20,617
16	Other Equipment	DEMLPG	125,468	87,412	638	0	10,700	15,964	6,272
17	LNG Related	PLT320L	47,024	32,761	239	0	4,010	5,983	2,351
18	LNG & LPG Related		584,941	407,523	2,974	0	49,885	74,427	29,239
19	Total Account 320	DEMLNG	11,015,640	7,674,491	56,000	0	939,445	1,401,608	560,636
20	321 L.N.G. Equipment		16,684,945	11,624,242	84,821	0	1,422,939	2,122,959	834,026
	Total Production Plant								

Bay State Gas Company
D.T.E. 05-27
Attachment AG-22-44(1)
Page 190 of 322

PRODUCTION COMPONENTS						
DEVELOPMENT OF RATE BASE-2						
GAS PLANT IN SERVICE						
INTANGIBLE PLANT						
1	301 Organization					
2	Organization		484	1,338	393	497
3	Adj Organization	1,315	(409)	(1,130)	(332)	(420)
4	Total Account 301	(1,111)	75	208	61	77
5	303 Misc. Intangible Plant	204	6,462	15,643	4,553	5,605
	Total Intangible Plant	14,662	6,538	15,851	4,614	5,682
		14,867				
PRODUCTION PLANT						
6	304 Land & Land Rights					
7	LNG Related	2,215	792	2,237	658	836
8	LPG Related	863	308	871	326	326
9	LNG & LPG Related	381	136	385	113	144
	Total Account 304	3,459	1,237	3,494	1,028	1,305
10	305 Structures & Improvements					
11	LNG Related	9,388	3,357	9,483	2,790	3,543
12	LPG Related	5,439	1,945	5,494	1,616	2,053
13	LNG & LPG Related	5,031	1,799	5,082	1,495	1,899
14	Total Account 305	19,858	7,101	20,059	5,902	7,495
	311 L.P. Gas Equipment	36,375	13,008	36,744	10,811	13,730
15	320 Other Equipment					
16	LNG Related	4,842	1,732	4,891	1,439	1,828
17	LPG Related	1,473	527	1,488	438	556
18	LNG & LPG Related	552	197	558	164	208
19	Total Account 320	6,867	2,456	6,937	2,041	2,592
20	321 L.N.G. Equipment	129,325	46,249	130,637	38,437	48,814
	Total Production Plant	195,883	70,052	197,870	58,218	73,936

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

30-Jun-05 11:19 AM

PRODUCTION COMPONENTS

DEVELOPMENT OF RATE BASE CONT-3

GAS PLANT IN SERVICE CONT

		ALLOC	TOTAL COMPANY	RESIDENTIAL HEATING R-3 & R-4	RESIDENTIAL NON-HEATING R-1 & R-2	OUTDOOR LIGHTING	HIGH WINTER LOW ANNUAL G-40 & T-40	HIGH WINTER MED ANNUAL G-41 & T-41	HIGH WINTER HIGH ANNUAL G-42 & T-42
DISTRIBUTION PLANT									
1	364 Land & Land Rights	DISTR	0	0	0	0	0	0	0
2	365 Right of Way	DISTR	0	0	0	0	0	0	0
3	366 Structures & Improvements	DISTR	0	0	0	0	0	0	0
4	367 Gas Mains								
5	Gas Mains - Bare Steel	DISTR	0	0	0	0	0	0	0
6	Gas Mains - Joint Clamping	DISTR	0	0	0	0	0	0	0
7	Gas Mains - Cast Iron	DISTR	0	0	0	0	0	0	0
8	Gas Mains - Cathodic Protection	DISTR	0	0	0	0	0	0	0
9	Gas Mains - Coated Steel	DISTR	0	0	0	0	0	0	0
10	Gas Mains - Plastic	DISTR	0	0	0	0	0	0	0
11	Adj Gas Mains - Plastic	DISTR	0	0	0	0	0	0	0
12	Total Account 367		0	0	0	0	0	0	0
13	368 Compressor Station Equipment	DISTR	0	0	0	0	0	0	0
14	369 Meas. & Reg. Station Equipment	DISTR	0	0	0	0	0	0	0
15	380 Gas Services	CUST380	0	0	0	0	0	0	0
16	381 Gas Meters	CUST381	0	0	0	0	0	0	0
17	382 Meter Installations	CUST382	0	0	0	0	0	0	0
18	383 Gas Regulators	CUST383	0	0	0	0	0	0	0
19	386 Other Property on Cust's Premises								
20	Gas Water Heaters	CUST3860	0	0	0	0	0	0	0
21	Cascade Diamond Boilers	CUST3862	0	0	0	0	0	0	0
22	Conversion Burners	CUST3863	0	0	0	0	0	0	0
23	Total Account 386		0	0	0	0	0	0	0
24	387 Other Equipment	DISTR	0	0	0	0	0	0	0
25	Total Distribution Plant		0	0	0	0	0	0	0
TRANSMISSION PLANT									
26	379 Other Equipment	DISTR	0	0	0	0	0	0	0
27	Total Transmission Plant		0	0	0	0	0	0	0

Bay State Gas Company
D.T.E. 05-27
Attachment AG-22-44(1)
Page 192 of 322

PRODUCTION COMPONENTS						
DEVELOPMENT OF RATE BASE CONT-3						
						ALLOC
HIGH WINTER LRG HI ANNUAL G-43 & T-43						
LOW WINTER LOW ANNUAL G-50 & T-50						
LOW WINTER MED ANNUAL G-51 & T-51						
LOW WINTER HIGH ANNUAL G-52 & T-52						
LOW WINTER LRG HI ANNUAL G-53 & T-53						
GAS PLANT IN SERVICE CONT'						
DISTRIBUTION PLANT						
1	364 Land & Land Rights	DISTR	0	0	0	0
2	365 Right of Way	DISTR	0	0	0	0
3	366 Structures & Improvements	DISTR	0	0	0	0
4	367 Gas Mains					
5	Gas Mains - Bare Steel	DISTR	0	0	0	0
6	Gas Mains - Joint Clamping	DISTR	0	0	0	0
7	Gas Mains - Cast Iron	DISTR	0	0	0	0
8	Gas Mains - Cathodic Protection	DISTR	0	0	0	0
9	Gas Mains - Coated Steel	DISTR	0	0	0	0
10	Gas Mains - Plastic	DISTR	0	0	0	0
11	Adj Gas Mains - Plastic	DISTR	0	0	0	0
12	Total Account 367		0	0	0	0
13	368 Compressor Station Equipment	DISTR	0	0	0	0
14	369 Meas. & Reg. Station Equipment	DISTR	0	0	0	0
15	380 Gas Services	CUST380	0	0	0	0
16	381 Gas Meters	CUST381	0	0	0	0
17	382 Meter Installations	CUST382	0	0	0	0
18	383 Gas Regulators	CUST383	0	0	0	0
19	386 Other Property on Cust's Premises					
20	Gas Water Heaters	CUST3860	0	0	0	0
21	Cascade Diamond Boilers	CUST3862	0	0	0	0
22	Conversion Burners	CUST3863	0	0	0	0
23	Total Account 386		0	0	0	0
24	387 Other Equipment	DISTR	0	0	0	0
25	Total Distribution Plant		0	0	0	0
TRANSMISSION PLANT						
26	379 Other Equipment	DISTR	0	0	0	0
27	Total Transmission Plant		0	0	0	0

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

30-Jun-05 11:19 AM

PRODUCTION COMPONENTS

DEVELOPMENT OF RATE BASE CONT-4

GAS PLANT IN SERVICE CONT

		ALLOC	TOTAL COMPANY	RESIDENTIAL HEATING R-3 & R-4	RESIDENTIAL NON-HEATING R-1 & R-2	OUTDOOR LIGHTING	HIGH WINTER LOW ANNUAL G-40 & T-40	HIGH WINTER MED ANNUAL G-41 & T-41	HIGH WINTER HIGH ANNUAL G-42 & T-42
GENERAL PLANT									
1	389 Land & Land Rights	LABOR	6,581	4,625	53	0	560	798	312
2	390 Structures & Improvements	LABOR	278,948	196,021	2,264	0	23,728	33,816	13,206
3	Total General Plant		285,529	200,645	2,318	0	24,288	34,614	13,518
GENERAL PLANT (Equipment)									
4	391 Office Equipment	LABOR	226,020	158,827	1,835	0	19,226	27,400	10,700
5	Office Equipment	LABOR	210,147	147,673	1,706	0	17,875	25,475	9,949
6	Total Account 391		436,166	306,501	3,540	0	37,101	52,875	20,649
7	392 Transportation Equipment	LABOR	90,270	63,434	733	0	7,679	10,943	4,274
8	393 Stores Equipment	LABOR	1,928	1,355	16	0	164	234	91
9	394 Tools, Shop & Garage Equipment	LABOR	70,576	49,595	573	0	6,003	8,556	3,341
10	396 Power Operated Equipment	LABOR	15,522	10,908	126	0	1,320	1,882	735
11	397 Communication Equipment	LABOR	483,774	339,955	3,927	0	41,151	58,646	22,903
12	Communications Equip & Meiscan	LABOR	(201,141)	(141,345)	(1,633)	(0)	(17,109)	(24,384)	(9,522)
13	Communications Equip Meiscan	PLT381	0	0	0	0	0	0	0
14	Communications Equip ERT/ITRON	PLT381	0	0	0	0	0	0	0
15	Total Account 397		282,633	198,610	2,294	0	24,041	34,263	13,380
16	398 Miscellaneous Equipment	LABOR	963	677	8	0	82	117	46
17	Total General Plant (Equipment)		898,059	631,080	7,289	0	76,391	108,869	42,516
18	Total Gas Plant In Service		19,206,515	13,396,095	105,241	0	1,637,432	2,428,732	953,443

Bay State Gas Company
D.T.E. 05-27
Attachment AG-22-44(1)
Page 194 of 322

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

30-Jun-05 11:19 AM

PRODUCTION COMPONENTS

ALLOC

HIGH WINTER
LRG HI ANNUAL
G-43 & T-43

LOW WINTER
LOW ANNUAL
G-50 & T-50

LOW WINTER
MED ANNUAL
G-51 & T-51

LOW WINTER
HIGH ANNUAL
G-52 & T-52

LOW WINTER
LRG HI ANNUAL
G-53 & T-53

DEVELOPMENT OF RATE BASE CONT-4

GAS PLANT IN SERVICE CONT

GENERAL PLANT

1 389 Land & Land Rights
2 390 Structures & Improvements
3 Total General Plant

GENERAL PLANT (Equipment)

391 Office Equipment
4 Office Equipment
5 Office IT Equipment
6 Total Account 391
7 392 Transportation Equipment
8 393 Stores Equipment
9 394 Tools, Shop & Garage Equipment
10 396 Power Operated Equipment
397 Communication Equipment
11 Communications Equip & Metscan
12 Communications Equip Metscan Adj
13 Communications Equip Metscan
14 Communications Equip ERT/ITRON
15 Total Account 397
16 398 Miscellaneous Equipment
17 Total General Plant (Equipment)

18 Total Gas Plant In Service

6/30/2005 11:46 AM

Page 4-2

BRK6.xls COST OF SERVICE

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

30-Jun-05 11:19 AM

PRODUCTION COMPONENTS		ALLOC	TOTAL COMPANY	RESIDENTIAL HEATING R-3 & R-4	RESIDENTIAL NON-HEATING R-1 & R-2	OUTDOOR LIGHTING	HIGH WINTER LOW ANNUAL G-40 & T-40	HIGH WINTER MED ANNUAL G-41 & T-41	HIGH WINTER HIGH ANNUAL G-42 & T-42
DEVELOPMENT OF RATE BASE CONT-5									
DEPRECIATION RESERVE									
INTANGIBLE PLANT RESERVE									
1	301 Organization	PLT301	88,148	61,481	483	0	7,515	11,147	4,376
2	Adj Organization	PLT301	(74,753)	(52,138)	(410)	(0)	(6,373)	(9,453)	(3,711)
3	Total Account 301		13,395	9,343	73	0	1,142	1,694	665
4	303 Misc. Intangible Plant	PLT303	714,852	502,337	5,802	0	60,807	86,659	33,843
5	Total Intangible Plant Reserve		728,247	511,680	5,876	0	61,949	88,353	34,508
PRODUCTION PLANT RESERVE									
6	305 Structures & Improvements	PLT305	1,106,694	771,023	5,626	0	94,382	140,813	55,320
7	311 L.P. Gas Equipment	PLT311	2,370,206	1,651,300	12,049	0	202,138	301,580	118,479
8	320 Other Equipment	PLT320	207,293	144,419	1,054	0	17,678	26,375	10,362
9	321 L.N.G. Equipment	PLT321	2,719,573	1,894,701	13,825	0	231,933	346,033	135,943
10	Total Production Plant Reserve		6,403,766	4,461,443	32,555	0	546,131	814,802	320,103
DISTRIBUTION PLANT RESERVE									
11	365 Right of Way	PLT365	0	0	0	0	0	0	0
12	366 Structures & Improvements	PLT366	0	0	0	0	0	0	0
13	367 Gas Mains	PLT367	0	0	0	0	0	0	0
14	368 Compressor Station Equipment	PLT368	0	0	0	0	0	0	0
15	369 Meas. & Reg. Station Equipment	PLT369	0	0	0	0	0	0	0
16	380 Gas Services	PLT380	0	0	0	0	0	0	0
17	381 Gas Meters	PLT381	0	0	0	0	0	0	0
18	382 Meter Installations	PLT382	0	0	0	0	0	0	0
19	383 Gas Regulators	PLT383	0	0	0	0	0	0	0
	386 Other Property on Cust's Premises								
20	Gas Water Heaters	PLT3860	0	0	0	0	0	0	0
21	Cascade Diamond Boilers	PLT3862	0	0	0	0	0	0	0
22	Conversion Burners	PLT3863	0	0	0	0	0	0	0
23	Total Account 386		0	0	0	0	0	0	0
24	387 Other Equipment	PLT387	0	0	0	0	0	0	0
25	Total Distribution Plant Reserve		0	0	0	0	0	0	0

Bay State Gas Company
D.T.E. 05-27
Attachment AG-22-44(1)
Page 196 of 322

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

30-Jun-05 11:19 AM

PRODUCTION COMPONENTS

		ALLOC	HIGH WINTER LRG HI ANNUAL G-43 & T-43	LOW WINTER LOW ANNUAL G-50 & T-50	LOW WINTER MED ANNUAL G-51 & T-51	LOW WINTER HIGH ANNUAL G-52 & T-52	LOW WINTER LRG HI ANNUAL G-53 & T-53
DEVELOPMENT OF RATE BASE CONT-5							
DEPRECIATION RESERVE							
INTANGIBLE PLANT RESERVE							
1	301 Organization	PLT301	1,028	378	1,045	307	388
2	Adj Organization	PLT301	(871)	(321)	(886)	(260)	(329)
3	Total Account 301		156	57	159	47	59
4	303 Misc. Intangible Plant	PLT303	7,938	3,499	8,469	2,465	3,034
5	Total Intangible Plant Reserve		8,094	3,556	8,628	2,511	3,093
PRODUCTION PLANT RESERVE							
6	305 Structures & Improvements	PLT305	12,993	4,646	13,124	3,862	4,904
7	311 L.P. Gas Equipment	PLT311	27,826	9,951	28,109	8,270	10,503
8	320 Other Equipment	PLT320	2,434	870	2,458	723	919
9	321 L.N.G. Equipment	PLT321	31,928	11,418	32,252	9,489	12,051
10	Total Production Plant Reserve		75,181	26,886	75,944	22,344	28,377
DISTRIBUTION PLANT RESERVE							
11	365 Right of Way	PLT365	0	0	0	0	0
12	366 Structures & Improvements	PLT366	0	0	0	0	0
13	367 Gas Mains	PLT367	0	0	0	0	0
14	368 Compressor Station Equipment	PLT368	0	0	0	0	0
15	369 Meas. & Reg. Station Equipment	PLT369	0	0	0	0	0
16	380 Gas Services	PLT380	0	0	0	0	0
17	381 Gas Meters	PLT381	0	0	0	0	0
18	382 Meter Installations	PLT382	0	0	0	0	0
19	383 Gas Regulators	PLT383	0	0	0	0	0
20	386 Other Property on Cust's Premises	PLT3860	0	0	0	0	0
21	Gas Water Heaters	PLT3862	0	0	0	0	0
22	Cascade Diamond Boilers	PLT3863	0	0	0	0	0
23	Conversion Burners		0	0	0	0	0
24	Total Account 386		0	0	0	0	0
25	387 Other Equipment	PLT387	0	0	0	0	0
	Total Distribution Plant Reserve		0	0	0	0	0

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

30-Jun-05 11:19 AM

PRODUCTION COMPONENTS

DEVELOPMENT OF RATE BASE CONT-6

DEPRECIATION RESERVE CONT

		ALLOC	TOTAL COMPANY	RESIDENTIAL HEATING R-3 & R-4	RESIDENTIAL NON-HEATING R-1 & R-2	OUTDOOR LIGHTING	HIGH WINTER LOW ANNUAL G-40 & T-40	HIGH WINTER MED ANNUAL G-41 & T-41	HIGH WINTER HIGH ANNUAL G-42 & T-42
1	TRANSMISSION PLANT RESERVE								
2	379 Other Equipment	PLT379	0	0	0	0	0	0	0
	Total Transmission Plant Reserve		0	0	0	0	0	0	0
3	GENERAL PLANT RESERVE								
4	390 Structures & Improvements	PLT390	83,589	58,739	678	0	7,110	10,133	3,957
	Total General Plant Reserve		83,589	58,739	678	0	7,110	10,133	3,957
5	GENERAL PLT RESERVE (Equipment)								
6	391 Office Equipment	PLT391	292,250	205,368	2,372	0	24,859	35,428	13,836
7	392 Transportation Equipment	PLT392	49,077	34,487	398	0	4,175	5,949	2,323
8	393 Stores Equipment	PLT393	(75)	(53)	(1)	0	(6)	(9)	(4)
9	394 Tools, Shop & Garage Equipment	PLT394	31,115	21,865	253	0	2,647	3,772	1,473
10	396 Power Operated Equipment	PLT396	6,672	4,689	54	0	568	809	316
11	397 Communication Equipment	PLT397O	174,665	122,739	1,418	0	14,857	21,174	8,269
12	Communications Equip & Metscan	PLT397O	(81,930)	(57,573)	(665)	(0)	(6,969)	(9,932)	(3,879)
13	Communications Equip Metscan Adj	PLT397M	0	0	0	0	0	0	0
14	Communications Equip ERT/ITRON	PLT397E	0	0	0	0	0	0	0
15	Total Account 397		92,735	65,166	753	0	7,888	11,242	4,390
16	398 Miscellaneous Equipment	PLT398	533	375	4	0	45	65	25
	Tot Gen Plt Reserve (Equipment)		472,306	331,897	3,834	0	40,175	57,256	22,360
17	Total Depreciation Reserve		7,687,909	5,363,759	42,942	0	655,365	970,545	380,928
19	Net Gas Plant in Service		11,518,606	8,032,336	62,299	0	982,066	1,458,187	572,515

Bay State Gas Company
D.T.E. 05-27
Attachment AG-22-44(1)
Page 198 of 322

6/30/2005 11:46 AM

PRODUCTION COMPONENTS

PRODUCTION COMPONENTS									
DEVELOPMENT OF RATE BASE CONT-7									
		ALLOC	TOTAL COMPANY	RESIDENTIAL HEATING R-3 & R-4	RESIDENTIAL NON-HEATING R-1 & R-2	OUTDOOR LIGHTING	HIGH WINTER LOW ANNUAL G-40 & T-40	HIGH WINTER MED ANNUAL G-41 & T-41	HIGH WINTER HIGH ANNUAL G-42 & T-42
ADDITIONS TO NET PLANT									
1	Cash Working Capital		0	0	0	0	0	0	0
2	Purchased Gas		1,494,599	1,109,385	59,777	1	136,231	97,542	31,753
3	Other O&M		1,494,599	1,109,385	59,777	1	136,231	97,542	31,753
Total Cash Working Capital									
Materials & Supplies									
4	Stores Expense Undistributed	DISTRPLT	0	0	0	0	0	0	0
5	Truck Stock	DISTRPLT	0	0	0	0	0	0	0
6	Meters Stock	PLT3813	0	0	0	0	0	0	0
7	Inventory-Imprest	DISTRPLT	0	0	0	0	0	0	0
8	Mat Management System IC Stock	DISTRPLT	0	0	0	0	0	0	0
9	Appliances & Parts	PLT386	0	0	0	0	0	0	0
10	Other Inventory Charges	DISTRPLT	0	0	0	0	0	0	0
11	Total Materials & Supplies		0	0	0	0	0	0	0
12	Total Additions to Net Plant		1,494,599	1,109,385	59,777	1	136,231	97,542	31,753
DEDUCTIONS TO NET PLANT									
Deferred Taxes									
13	Intangible Related	INTPLT	232,629	163,456	1,880	0	19,788	28,217	11,020
14	Production Related	PRODPLT	1,787,628	1,245,423	9,088	0	152,454	227,454	89,358
15	Transmission & Distribution Related	DISTRPLT	0	0	0	0	0	0	0
16	General Related	GENPLT	138,001	96,976	1,120	0	11,739	16,729	6,533
17	Communications Equip Metscan Adj	PLT3970	(21,340)	(14,996)	(173)	(0)	(1,815)	(2,587)	(1,010)
18	Deferred Taxes		2,136,918	1,490,859	11,915	0	182,166	269,813	105,901
19	Unamortized Pre-1971 ITC	PLANT	284	198	2	0	24	36	14
20	Customer Contributions	PLT3803	0	0	0	0	0	0	0
Customer Deposits									
21	Customer Deposits - Firm Customers	CUSTDEP	0	0	0	0	0	0	0
22	Customer Deposits - Marketers	CUSTTR	0	0	0	0	0	0	0
23	Total Customer Deposits		0	0	0	0	0	0	0
24	Unclaimed Checks	REVCLAIM	23,498	17,881	879	0	1,949	1,484	512
25	Total Deductions to Net Plant		2,160,701	1,508,938	12,796	0	184,139	271,333	106,427
26	Total Rate Base		10,852,504	7,632,783	109,280	1	934,158	1,284,396	487,840

Bay State Gas Company
D.T.E. 05-27
Attachment AG-22-44(1)
Page 200 of 322

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

30-Jun-05 11:19 AM

PRODUCTION COMPONENTS

	LOW WINTER LOW ANNUAL G-50 & T-50	LOW WINTER MED ANNUAL G-51 & T-51	LOW WINTER HIGH ANNUAL G-52 & T-52	LOW WINTER LRG HI ANNUAL G-53 & T-53
HIGH WINTER LRG HI ANNUAL G-43 & T-43				
ALLOC				

DEVELOPMENT OF RATE BASE CONT-7

ADDITIONS TO NET PLANT

1	Cash Working Capital	0	0	0	0
2	Purchased Gas	6,974	22,231	6,041	3,578
3	Other O&M	6,974	22,231	6,041	3,578
3	Total Cash Working Capital				

Materials & Supplies

4	Stores Expense Undistributed	0	0	0	0
5	Truck Stock	0	0	0	0
6	Meters Stock	0	0	0	0
7	Inventory-Imprest	0	0	0	0
8	Mat Management System IC Stock	0	0	0	0
9	Appliances & Parts	0	0	0	0
10	Other Inventory Charges	0	0	0	0
11	Total Materials & Supplies	0	0	0	0

12 Total Additions to Net Plant

DEDUCTIONS TO NET PLANT

13	Deferred Taxes				
14	Intangible Related	1,137	2,756	802	988
15	Production Related	7,505	21,200	6,238	7,922
16	Transmission & Distribution Related	0	0	0	0
17	General Related	675	1,635	476	586
18	Communications Equip Metscan Adj	(104)	(253)	(74)	(91)
19	Deferred Taxes	9,213	25,338	7,442	9,405
20	Unamortized Pre-1971 ITC	1	3	1	1
21	Customer Contributions	0	0	0	0
22	Customer Deposits	0	0	0	0
23	Customer Deposits - Firm Customers	0	0	0	0
24	Customer Deposits - Marketers	0	0	0	0
25	Total Customer Deposits	273	276	72	57
26	Unclaimed Checks				
27	REVCLAIM				
28	Total Deductions to Net Plant	9,487	25,617	7,514	9,463
29	Total Rate Base	60,819	133,201	38,667	44,927

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

30-Jun-05 11:19 AM

PRODUCTION COMPONENTS

	ALLOC	TOTAL COMPANY	RESIDENTIAL HEATING R-3 & R-4	RESIDENTIAL NON-HEATING R-1 & R-2	OUTDOOR LIGHTING	HIGH WINTER LOW ANNUAL G-40 & T-40	HIGH WINTER MED ANNUAL G-41 & T-41	HIGH WINTER HIGH ANNUAL G-42 & T-42
OPERATING REVENUES-8								
REVENUES								
GAS OPERATING REVENUES								
SALES REVENUES								
1 Firm Sales of Gas		338,914,239	230,848,852	6,046,507	2,349	22,259,198	35,408,497	15,643,522
2 Special Contracts	DISTR	0	0	0	0	0	0	0
3 Special Contracts Adjustment	DISTR	0	0	0	0	0	0	0
4 Special Contracts - Other	DISTR	0	0	0	0	0	0	0
5 Total Sales of Gas		338,914,239	230,848,852	6,046,507	2,349	22,259,198	35,408,497	15,643,522
OTHER OPERATING REVENUES								
487-Late Payment Charges								
6 High Wint Low Ann Rate G40 & T40	C487R40	156,817	0	0	0	156,817	0	0
7 High Wint Med Ann Rate G41 & T41	C487R41	163,308	0	0	0	0	163,308	0
8 High Wint High Ann Rate G42 & T42	C487R42	48,347	0	0	0	0	0	48,347
9 High Wint Lrg Ann Rate G43 & T43	C487R43	9,214	0	0	0	0	0	0
10 Low Wint Low Ann Rate G50 & T50	C487R50	27,176	0	0	0	0	0	0
11 Low Wint Med Ann Rate G51 & T51	C487T51	47,108	0	0	0	0	0	0
12 Low Wint High Ann Rate G52 & T52	C487R52	14,802	0	0	0	0	0	0
13 Low Wint Lrg Ann Rate G53 & T53	C487R53	3,425	0	0	0	0	0	0
14 Total Account 487		470,197	0	0	0	156,817	163,308	48,347
15 487-Return Check Charges	CUST487	0	0	0	0	0	0	0
16 488-Rental Revenues-W/H & Conv Burn	CUST488	0	0	0	0	0	0	0
17 882-Revenue Guardian Care & C/S	CUST882	0	0	0	0	0	0	0
493-Rent from Gas Property								
18 Rent from Gas Property	PLANT	441	308	2	0	38	56	22
19 LNG Tank Lease Revenue	DEMLNG	446,250	310,898	2,269	0	38,057	56,780	22,307
20 I/C Rents	DISTRPLT	0	0	0	0	0	0	0
21 Total Account 493		446,691	311,206	2,271	0	38,095	56,836	22,328
22 903-Cust R&C, Shutoff & Turn-Off	DISTRPLT	0	0	0	0	0	0	0
23 Total Other Operating Revenues		916,888	311,206	2,271	0	194,912	220,144	70,676
24 Total Gas Operating Revenues		339,831,128	231,160,058	6,048,778	2,349	22,454,110	35,628,641	15,714,198

Bay State Gas Company
D.T.E. 05-27
Attachment AG-22-44(1)
Page 202 of 322

PRODUCTION COMPONENTS		HIGH WINTER LRG HI ANNUAL G-43 & T-43		LOW WINTER LOW ANNUAL G-50 & T-50		LOW WINTER MED ANNUAL G-51 & T-51		LOW WINTER HIGH ANNUAL G-52 & T-52		LOW WINTER LRG HI ANNUAL G-53 & T-53		
OPERATING REVENUES-8		ALLOC										
REVENUES												
GAS OPERATING REVENUES												
SALES REVENUES												
1	Firm Sales of Gas			3,977,774		4,004,942		12,077,379		5,837,083		2,808,137
2	Special Contracts		DISTR	0		0		0		0		0
3	Special Contracts Adjustment		DISTR	0		0		0		0		0
4	Special Contracts - Other		DISTR	0		0		0		0		0
5	Total Sales of Gas			3,977,774		4,004,942		12,077,379		5,837,083		2,808,137
OTHER OPERATING REVENUES												
487-Late Payment Charges												
6	High Wint Low Ann Rate G40 & T40		C487R40	0		0		0		0		0
7	High Wint Med Ann Rate G41 & T41		C487R41	0		0		0		0		0
8	High Wint High Ann Rate G42 & T42		C487R42	0		0		0		0		0
9	High Wint Lrg Ann Rate G43 & T43		C487R43	9,214		0		0		0		0
10	Low Wint Low Ann Rate G50 & T50		C487R50			27,176		0		0		0
11	Low Wint Med Ann Rate G51 & T51		C487T51	0		0		47,108		0		0
12	Low Wint High Ann Rate G52 & T52		C487R52	0		0		0		14,802		0
13	Low Wint Lrg Ann Rate G53 & T53		C487R53	0		0		0		0		0
14	Total Account 487			9,214		27,176		47,108		14,802		3,425
15	487-Return Check Charges		CUST487	0		0		0		0		0
16	488-Rental Revenues-WIH & Conv Burn		CUST488	0		0		0		0		0
17	882-Revenue Guardian Care & C/S		CUST882	0		0		0		0		0
18	493-Rent from Gas Property		PLANT	5		2		5		2		2
19	Rent from Gas Property		DEMLNG	5,239		1,874		5,292		1,557		1,977
20	LNG Tank Lease Revenue		DISTRPLT	0		0		0		0		0
21	I/C Rents			5,244		1,875		5,297		1,559		1,979
22	Total Account 493			0		0		0		0		0
23	903-Cust R&C, Shutoff & Turn-Off		DISTRPLT	14,458		29,052		52,405		16,361		5,404
24	Total Other Operating Revenues											
25	Total Gas Operating Revenues			3,992,232		4,033,993		12,129,784		5,853,443		2,813,541

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

30-Jun-05 11:19 AM

PRODUCTION COMPONENTS

OPERATION & MAINTENANCE EXP-9

OPERATION & MAINTENANCE EXP

LIQUEFIED PROPANE GAS PRODUCTION

		TOTAL COMPANY	RESIDENTIAL HEATING R-3 & R-4	RESIDENTIAL NON-HEATING R-1 & R-2	OUTDOOR LIGHTING	HIGH WINTER LOW ANNUAL G-40 & T-40	HIGH WINTER MED ANNUAL G-41 & T-41	HIGH WINTER HIGH ANNUAL G-42 & T-42
1	Operation Expense							
2	710-Supervision	33,314	23,210	169	0	2,841	4,239	1,665
3	717-LPG Gas Expenses	340	237	2	0	29	43	17
4	719-Handling Expense	14,300	9,963	73	0	1,220	1,820	715
5	723-Fuel for LPG Gas Process	0	0	0	0	0	0	0
6	728-Liquefied Petroleum Gas	0	0	0	0	0	0	0
7	735-Miscellaneous Production Exp	152,298	106,104	774	0	12,988	19,378	7,613
8	Total Operation Expense	200,252	139,513	1,018	0	17,078	25,480	10,010
9	Maintenance							
10	740-Supervision	8,190	5,706	42	0	698	1,042	409
11	741-Maintenance of Struct & Improv	8,584	5,981	44	0	732	1,092	429
12	742-Maintenance of Production Equip	76,703	53,438	390	0	6,541	9,759	3,834
13	Total Maintenance Expense	93,477	65,125	475	0	7,972	11,894	4,673
14	Total Liquefied Propane Gas Prod Exp	293,729	204,638	1,493	0	25,050	37,373	14,683

LIQUEFIED NATURAL GAS PRODUCTION

15	Operation Expense							
16	750-Supervision	370,139	257,872	1,882	0	31,566	47,096	18,502
17	754-Liquefaction Expense	118,441	82,517	602	0	10,101	15,070	5,920
18	757-Vaporization Expense	20,960	14,603	107	0	1,788	2,667	1,048
19	758-Liquefied Natural Gas	0	0	0	0	0	0	0
20	759-Handling Expense	18,781	13,085	95	0	1,602	2,390	939
21	763-Fuel for Vaporization Expense	0	0	0	0	0	0	0
22	768-LNG Raw Materials	0	0	0	0	0	0	0
23	775-Miscellaneous Production Exp	460,361	320,729	2,340	0	39,281	58,575	23,012
24	777-Lease Expense	652,952	454,905	3,319	0	55,686	83,080	32,639
25	Total Operation Expense	1,641,635	1,143,711	8,346	0	140,003	208,878	82,060
26	Maintenance							
27	780-Supervision	5,357	3,732	27	0	457	682	268
28	781-Maintenance of Struct & Improv	7,897	5,502	40	0	673	1,005	395
29	782-Maintenance of Production Equip	187,351	130,525	952	0	15,978	23,838	9,365
30	Total Maintenance Expense	200,604	139,759	1,020	0	17,108	25,524	10,028
31	Total Liquefied Natural Gas Prod Exp	1,842,239	1,283,470	9,365	0	157,111	234,403	92,088

Bay State Gas Company
D.T.E. 05-27
Attachment AG-22-44(1)
Page 204 of 322

PRODUCTION COMPONENTS		ALLOC		HIGH WINTER LRG HI ANNUAL G-43 & T-43	LOW WINTER LOW ANNUAL G-50 & T-50	LOW WINTER MED ANNUAL G-51 & T-51	LOW WINTER HIGH ANNUAL G-52 & T-52	LOW WINTER LRG HI ANNUAL G-53 & T-53
OPERATION & MAINTENANCE EXP-9								
OPERATION & MAINTENANCE EXP								
LIQUEFIED PROPANE GAS PRODUCTION								
1	Operation Expense							
2	710-Supervision	391	140			395	116	148
3	717-LPG Gas Expenses	4	1			4	1	2
4	719-Handling Expense	168	60			170	50	63
5	723-Fuel for LPG Gas Process	0	0			0	0	0
6	728-Liquefied Petroleum Gas	0	0			0	0	0
7	735-Miscellaneous Production Exp	1,788	639			1,806	531	675
	Total Operation Expense	2,351	841			2,375	699	887
8	740-Supervision	96	34			97	29	36
9	741-Maintenance of Struct & Improv	101	36			102	30	38
10	742-Maintenance of Production Equip	900	322				268	340
11	Total Maintenance Expense	1,097	392			1,109	326	414
12	Total Liquefied Propane Gas Prod Exp	3,448	1,233			3,483	1,025	1,302
LIQUEFIED NATURAL GAS PRODUCTION								
13	Operation Expense							
14	750-Supervision	4,345	1,554			4,390	1,292	1,640
15	754-Liquefaction Expense	1,391	497			1,405	413	525
16	757-Vaporization Expense	246	88			249	73	93
17	758-Liquefied Natural Gas	0	0			0	0	0
18	759-Handling Expense	220	79			223	66	83
19	763-Fuel for Vaporization Expense	0	0			0	0	0
20	768-LNG Raw Materials	0	0			0	0	0
21	775-Miscellaneous Production Exp	5,405	1,933			5,460	1,606	2,040
22	777-Lease Expense	7,666	2,741			7,743	2,278	2,893
	Total Operation Expense	19,273	6,892			19,468	5,728	7,275
	Maintenance							
23	780-Supervision	63	22			64	19	24
24	781-Maintenance of Struct & Improv	93	33			94	28	35
25	782-Maintenance of Production Equip	2,200	787			2,222	654	830
26	Total Maintenance Expense	2,355	842			2,379	700	889
27	Total Liquefied Natural Gas Prod Exp	21,628	7,735			21,847	6,428	8,164

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

30-Jun-05 11:19 AM

PRODUCTION COMPONENTS

OPERATION & MAINT EXP CONT-10

OTHER GAS SUPPLY EXPENSES
PURCHASED GAS SUPPLY

	ALLOC	TOTAL COMPANY	RESIDENTIAL HEATING R-3 & R-4	RESIDENTIAL NON-HEATING R-1 & R-2	OUTDOOR LIGHTING	HIGH WINTER LOW ANNUAL G-40 & T-40	HIGH WINTER MED ANNUAL G-41 & T-41	HIGH WINTER HIGH ANNUAL G-42 & T-42
Gas Supply Demand Charges								
1 Base Demand Charges	DBASE	6,288,067	3,862,966	300,841	169	168,590	358,374	205,273
2 Remaining Demand Charges	DREMAIN	45,807,642	31,913,800	232,905	0	3,906,613	5,828,405	2,289,761
3 Total Demand Gas Costs		52,095,709	35,776,767	533,746	169	4,075,203	6,186,779	2,495,034
Gas Supply Commodity Charges								
4 Base Commodity Charges	EBASE	80,774,205	49,657,716	3,867,284	2,167	2,158,849	4,619,659	2,632,837
5 Remaining Commodity Charges	EREMAIN	191,688,704	134,395,424	1,128,159	0	14,855,080	23,713,567	10,221,852
6 Total Commodity Gas Costs		272,462,909	184,053,140	4,995,443	2,167	17,013,929	28,333,226	12,854,689
7 Total Gas Supply Expense		324,558,618	219,829,907	5,529,189	2,336	21,089,132	34,520,005	15,349,723
8 Total Production Expense		326,694,586	221,318,015	5,540,048	2,336	21,271,293	34,791,781	15,456,493

Bay State Gas Company
D.T.E. 05-27
Attachment AG-22-44(1)
Page 206 of 322

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

30-Jun-05 11:19 AM

PRODUCTION COMPONENTS

	ALLOC	HIGH WINTER LRG HI ANNUAL G-43 & T-43	LOW WINTER LOW ANNUAL G-50 & T-50	LOW WINTER MED ANNUAL G-51 & T-51	LOW WINTER HIGH ANNUAL G-52 & T-52	LOW WINTER LRG HI ANNUAL G-53 & T-53
--	-------	---	---	---	--	--

OPERATION & MAINT EXP CONT-10

OTHER GAS SUPPLY EXPENSES
PURCHASED GAS SUPPLY

1	Gas Supply Demand Charges					
2	Base Demand Charges	122,834	195,298	638,567	342,813	92,342
3	Remaining Demand Charges	537,777	192,307	543,192	159,796	203,086
	Total Demand Gas Costs	660,611	387,605	1,181,759	502,609	295,428
4	Gas Supply Commodity Charges					
5	Base Commodity Charges	1,577,413	2,506,976	8,208,799	4,357,592	1,184,913
6	Remaining Commodity Charges	1,678,560	945,632	2,525,235	933,008	1,292,187
	Total Commodity Gas Costs	3,255,973	3,452,608	10,734,034	5,290,600	2,477,100
7	Total Gas Supply Expense	3,916,584	3,840,213	11,915,793	5,793,209	2,772,528
8	Total Production Expense	3,941,660	3,849,181	11,941,124	5,800,662	2,781,993

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

30-Jun-05 11:19 AM

PRODUCTION COMPONENTS

OPERATION & MAINT EXP CONT-11

TRANSMISSION & DISTRIBUTION EXP

	ALLOC	TOTAL COMPANY	RESIDENTIAL HEATING R-3 & R-4	RESIDENTIAL NON-HEATING R-1 & R-2	OUTDOOR LIGHTING	HIGH WINTER LOW ANNUAL G-40 & T-40	HIGH WINTER MED ANNUAL G-41 & T-41	HIGH WINTER HIGH ANNUAL G-42 & T-42
1	TLABDO	0	0	0	0	0	0	0
2	DISTR	0	0	0	0	0	0	0
3	851-System Control & Load Dispatch	0	0	0	0	0	0	0
4	852-Communication System Exp	0	0	0	0	0	0	0
5	857-Measuring & Regulating Stat Exp	0	0	0	0	0	0	0
6	874-Mains and Services Exp	0	0	0	0	0	0	0
7	878-Meter & House Regulator Exp	0	0	0	0	0	0	0
8	879-Customer Installations Exp	0	0	0	0	0	0	0
9	880-Other Expenses	0	0	0	0	0	0	0
10	881-Rents	0	0	0	0	0	0	0
	Total Operation Expense	0	0	0	0	0	0	0
	Maintenance							
11	885-Supervision	0	0	0	0	0	0	0
12	886-Maintenance of Struct & Improv	0	0	0	0	0	0	0
13	887-Maintenance of Mains	0	0	0	0	0	0	0
14	888-Maint of Compressor Station Equip	0	0	0	0	0	0	0
15	889-Maint of Meas & Reg Station Equip	0	0	0	0	0	0	0
16	892-Maintenance of Services	0	0	0	0	0	0	0
17	893-Maint of Meters and House Regul	0	0	0	0	0	0	0
18	894-Maintenance of Other Equipment	0	0	0	0	0	0	0
19	Total Maintenance Expense	0	0	0	0	0	0	0
20	Total Transmission and Distribution Exp	0	0	0	0	0	0	0

Bay State Gas Company
D.T.E. 05-27
Attachment AG-22-44(1)
Page 208 of 322

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

30-Jun-05 11:19 AM

PRODUCTION COMPONENTS

OPERATION & MAINT EXP CONT-11

ALLOC

HIGH WINTER
LRG HI ANNUAL
G-43 & T-43

LOW WINTER
LOW ANNUAL
G-50 & T-50

LOW WINTER
MED ANNUAL
G-51 & T-51

LOW WINTER
HIGH ANNUAL
G-52 & T-52

LOW WINTER
LRG HI ANNUAL
G-53 & T-53

TRANSMISSION & DISTRIBUTION EXP

Operation Expense

1	850-Operation Supervision & Engineer	TLABDO	0	0	0	0	0
2	851-System Control & Load Dispatch	DISTR	0	0	0	0	0
3	852-Communication System Exp	DISTR	0	0	0	0	0
4	857-Measuring & Regulating Stat Exp	PLT369	0	0	0	0	0
5	874-Mains and Services Exp	PLT36780	0	0	0	0	0
6	878-Meter & House Regulator Exp	PLT3813	0	0	0	0	0
7	879-Customer Installations Exp	CUST879	0	0	0	0	0
8	880-Other Expenses	EXP8519	0	0	0	0	0
9	881-Rents	DISTR	0	0	0	0	0
10	Total Operation Expense		0	0	0	0	0

Maintenance

11	885-Supervision	TLABDM	0	0	0	0	0
12	886-Maintenance of Struct & Improv	PLT366	0	0	0	0	0
13	887-Maintenance of Mains	PLT367	0	0	0	0	0
14	888-Maint of Compressor Station Equip	PLT368	0	0	0	0	0
15	889-Maint of Meas & Reg Station Equip	PLT369	0	0	0	0	0
16	892-Maintenance of Services	PLT380	0	0	0	0	0
17	893-Maint of Meters and House Regul	PLT3813	0	0	0	0	0
18	894-Maintenance of Other Equipment	PLT387	0	0	0	0	0
19	Total Maintenance Expense		0	0	0	0	0

Total Transmission and Distribution Exp

0

0

0

0

0

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

30-Jun-05 11:19 AM

PRODUCTION COMPONENTS

OPERATION & MAINT EXP CONT-12

CUSTOMER ACCOUNTS EXPENSES

	ALLOC	TOTAL COMPANY	RESIDENTIAL HEATING R-3 & R-4	RESIDENTIAL NON-HEATING R-1 & R-2	OUTDOOR LIGHTING	HIGH WINTER LOW ANNUAL G-40 & T-40	HIGH WINTER MED ANNUAL G-41 & T-41	HIGH WINTER HIGH ANNUAL G-42 & T-42
1 901-Supervision	TLABCA	0	0	0	0	0	0	0
2 902-Meter Reading Expenses	CUST902	0	0	0	0	0	0	0
3 903-Cust Records & Collection Exp								
4 Cust Billing & Payment Proc Exp	CUST903	0	0	0	0	0	0	0
5 Collections Expense	CUST903C	0	0	0	0	0	0	0
6 Service Customer Equipment	DISTRPLT	0	0	0	0	0	0	0
7 Call Center Expenses	EXP903T	0	0	0	0	0	0	0
8 Postage Adjustment	CUST903	0	0	0	0	0	0	0
9 Total Account 903		0	0	0	0	0	0	0
904-Uncollectible Accounts								
9 Resid Heating Rate R-3 & R-4	C904R3	4,300,975	4,300,975	0	0	0	0	0
10 Resid Non-Heating Rate R-1 & R-2	C904R1	333,285	0	333,285	0	0	0	0
11 Outdoor Lighting	C904OL	0	0	0	0	0	0	0
12 High Wint Low Ann Rate G40 & T40	C904R40	563,471	0	0	563,471	0	0	0
13 High Wint Med Ann Rate G41 & T41	C904R41	175,700	0	0	0	175,700	0	0
14 High Wint High Ann Rate G42 & T42	C904R42	20,768	0	0	0	0	0	0
15 High Wint Lrg Ann Rate G43 & T43	C904R43	568	0	0	0	0	0	20,768
16 Low Wint Low Ann Rate G50 & T50	C904R50	106,806	0	0	0	0	0	0
17 Low Wint Med Ann Rate G51 & T51	C904T51	66,521	0	0	0	0	0	0
18 Low Wint High Ann Rate G52 & T52	C904R52	7,932	0	0	0	0	0	0
19 Low Wint Lrg Ann Rate G53 & T53	C904R53	1,114	0	0	0	0	0	0
20 Adjustment Bad Debt Gas Sales	EXP904S	919,939	919,939	71,287	120,521	37,581	4,442	0
21 Adj Uncollectible Prop Rate Increase	EXP904S	317,011	244,473	18,944	32,028	9,987	1,180	0
22 Bad Debt Expense - Cust Service	CUST882	0	0	0	0	0	0	0
23 Bad Debt Expense - Rental	PLT386	0	0	0	0	0	0	0
24 Adjust Bad Debt Other Revenues	EXP904O	0	0	0	0	0	0	0
25 Total Account 904		7,087,050	5,465,387	423,516	716,020	223,268	26,390	0
26 Total Customer Accounts Expenses		7,087,050	5,465,387	423,516	716,020	223,268	26,390	0

SALES EXPENSES

27 911-Supervision	TLABSA	0	0	0	0	0	0	0
28 912-Demonstrating & Selling Exp	CUST912	0	0	0	0	0	0	0
29 913-Advertising Expense								
30 Advertising Expense	CUST913	0	0	0	0	0	0	0
31 Advertising Guardian Care	EXP879	0	0	0	0	0	0	0
32 Advertising Water Heating Program	PLT386	0	0	0	0	0	0	0
33 Total Account 913		0	0	0	0	0	0	0
34 916-Miscellaneous Sales Exp	EXP9123	0	0	0	0	0	0	0
Total Sales Expenses		0	0	0	0	0	0	0

Bay State Gas Company
D.T.E. 05-27
Attachment AG-22-44(1)
Page 210 of 322

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

30-Jun-05 11:19 AM

PRODUCTION COMPONENTS

OPERATION & MAINT EXP CONT-12

CUSTOMER ACCOUNTS EXPENSES

		ALLOC	HIGH WINTER LRG HI ANNUAL G-43 & T-43	LOW WINTER LOW ANNUAL G-50 & T-50	LOW WINTER MED ANNUAL G-51 & T-51	LOW WINTER HIGH ANNUAL G-52 & T-52	LOW WINTER LRG HI ANNUAL G-53 & T-53
1	901-Supervision	TLABCA	0	0	0	0	0
2	902-Meter Reading Expenses	CUST902	0	0	0	0	0
3	903-Cust Records & Collection Exp	CUST903	0	0	0	0	0
4	Cust Billing & Payment Proc Exp	CUST903C	0	0	0	0	0
5	Collections Expense	DISTRPLT	0	0	0	0	0
6	Service Customer Equipment	EXP903T	0	0	0	0	0
7	Call Center Expenses	CUST903	0	0	0	0	0
8	Postage Adjustment		0	0	0	0	0
9	Total Account 903		0	0	0	0	0
10	904-Uncollectible Accounts		0	0	0	0	0
11	Resid Heating Rate R-3 & R-4	C904R3	0	0	0	0	0
12	Resid Non-Heating Rate R-1 & R-2	C904R1	0	0	0	0	0
13	Outdoor Lighting	C904OL	0	0	0	0	0
14	High Wint Low Ann Rate G40 & T40	C904R40	0	0	0	0	0
15	High Wint Med Ann Rate G41 & T41	C904R41	0	0	0	0	0
16	High Wint High Ann Rate G42 & T42	C904R42	0	0	0	0	0
17	High Wint Lrg Ann Rate G43 & T43	C904R43	568	0	0	0	0
18	Low Wint Low Ann Rate G50 & T50	C904R50	0	106,806	0	0	0
19	Low Wint Med Ann Rate G51 & T51	C904T51	0	0	66,521	0	0
20	Low Wint High Ann Rate G52 & T52	C904R52	0	0	0	7,932	0
21	Low Wint Lrg Ann Rate G53 & T53	C904R53	0	0	0	0	1,114
22	Adjustment Bad Debt Gas Sales	EXP904S	121	22,845	14,228	1,697	238
23	Adj Uncollectible Prop Rate Increase	EXP904S	32	6,071	3,781	451	63
24	Bad Debt Expense - Cust Service	CUST882	0	0	0	0	0
25	Bad Debt Expense - Rental	PLT386	0	0	0	0	0
26	Adjust Bad Debt Other Revenues	EXP904O	0	0	0	0	0
27	Total Account 904		721	135,721	84,531	10,079	1,416
28	Total Customer Accounts Expenses		721	135,721	84,531	10,079	1,416

SALES EXPENSES

27	911-Supervision	TLABSA	0	0	0	0	0
28	912-Demonstrating & Selling Exp	CUST912	0	0	0	0	0
29	913-Advertising Expense	CUST913	0	0	0	0	0
30	Advertising Expense	EXP879	0	0	0	0	0
31	Advertising Guardian Care	PLT386	0	0	0	0	0
32	Advertising Water Heating Program		0	0	0	0	0
33	Total Account 913		0	0	0	0	0
34	916-Miscellaneous Sales Exp	EXP9123	0	0	0	0	0
35	Total Sales Expenses		0	0	0	0	0

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

30-Jun-05 11:19 AM

PRODUCTION COMPONENTS

OPERATION & MAINT EXP CONT-13

ADMINISTRATIVE & GENERAL EXP

	ALLOC	TOTAL COMPANY	RESIDENTIAL HEATING R-3 & R-4	RESIDENTIAL NON-HEATING R-1 & R-2	OUTDOOR LIGHTING	HIGH WINTER LOW ANNUAL G-40 & T-40	HIGH WINTER MED ANNUAL G-41 & T-41	HIGH WINTER HIGH ANNUAL G-42 & T-42
1 Operation Expense								
2 920-Administrative & General Salaries	REVCLAIM	147,397	112,160	5,516	0	12,224	9,307	3,211
3 921-Office Supplies & Expenses	REVCLAIM							
4 Office Supplies & Expenses	REVCLAIM	361,637	275,183	13,534	0	29,990	22,834	7,879
5 LDAC Unbilled Revenues Adj	REVCLAIM	(31,555)	(24,012)	(1,181)	(0)	(2,617)	(1,992)	(687)
6 Total Account 921		330,082	251,171	12,353	0	27,373	20,841	7,192
7 922-Administrative Exp Transferred-Cr	REVCLAIM	(322,036)	(245,049)	(12,052)	(0)	(26,706)	(20,333)	(7,016)
8 923-Outside Services Employed								
9 Nisource Basis 1 - 50% Gross Plt	BASIS1P	65,296	45,535	358	0	5,566	8,256	3,241
10 N Basis 1 - 50% O&M Ex Gas Costs	BASIS1OM	357,277	268,563	15,937	0	34,299	20,581	5,894
11 Outside Services Nisource Basis 10	BASIS10	0	0	0	0	0	0	0
12 Outside Services Nisource Basis 11	BASIS11	28,571	20,077	232	0	2,430	3,464	1,353
13 Outside Services Nisource Basis 13	REVCLAIM	226,914	172,667	8,492	0	18,818	14,327	4,944
14 Out Serv Basis 13 - Facilities Mgt	PLANT	7,242	5,051	40	0	617	916	360
15 Out Serv Basis 13 - IT Billing	CUST903	0	0	0	0	0	0	0
16 Outside Services Nisource Basis 2	BASIS2	16,222	11,315	89	0	1,383	2,051	805
17 Outside Services Nisource Basis 20	BASIS20	201,089	152,629	7,331	0	16,690	13,082	4,551
18 Nisource Basis 7 - 50% Deprec Plt	BASIS7P	1,775	1,237	9	0	151	225	88
19 Nisource Basis 7 - 50% O&M	BASIS7OM	61,015	41,466	1,091	0	4,023	6,398	2,828
20 Outside Services Nisource Basis 9	BASIS9	1,319	927	11	0	112	160	62
21 Outside Serv Nisource Co 12	BASCO12	119,189	89,138	4,191	0	10,251	8,365	2,906
22 BSG Communications	REVCLAIM	18,801	14,306	704	0	1,559	1,187	410
23 Regulatory External Affairs	REVCLAIM	27,863	21,202	1,043	0	2,311	1,759	607
24 Printing & Inserting	EXP903	0	0	0	0	0	0	0
25 Finance & Acctg & HR	REVCLAIM	27,696	21,075	1,036	0	2,297	1,749	603
26 Regulatory	REVCLAIM	31,374	23,874	1,174	0	2,602	1,981	684
27 Legal Energy Distr East	REVCLAIM	47,133	35,865	1,764	0	3,909	2,976	1,027
28 Fleet Management	LABOR	10,406	7,313	84	0	885	1,262	493
29 Nisource Retail Services	EXP879	0	0	0	0	0	0	0
30 Oth Outside Service - Direct Billed	REVCLAIM	151,970	115,639	5,687	0	12,603	9,595	3,311
31 Total Out Serv - Direct Billed		315,243	239,274	11,492	0	26,165	20,509	7,134
32 Outside Services Employed BSG	REVCLAIM	113,991	86,740	4,266	0	9,453	7,197	2,484
33 NIS Gas Dispatching & Control	DISTR	0	0	0	0	0	0	0
34 NIS Gas Acq & Dispat Costs - Sales	GASCOSTS	1,491,704	1,010,360	25,413	11	96,928	158,657	70,549
35 NIS Gas Acq & Dispat Costs - Trans	DISTR	0	0	0	0	0	0	0
36 Nisource Payroll & Benefits Adj	REVCLAIM	63,903	48,626	2,391	0	5,299	4,035	1,392
37 Nisource PBOP & Pension	PENSION	0	0	0	0	0	0	0
38 Nisource Charitable Contr Adj	REVCLAIM	(738)	(561)	(28)	(0)	(61)	(47)	(16)
39 DSM Implementation Expense Adj	REVCLAIM	(204,180)	(155,368)	(7,641)	(0)	(16,932)	(12,892)	(4,448)
40 Customer Choice Recoveries Adj	REVCLAIM	5,558	4,230	208	0	461	351	121
41 Total Account 923		2,871,382	2,041,907	73,883	12	215,653	255,636	92,247
42 924-Property Insurance	PLANT	0	0	0	0	0	0	0
43 925-Injuries & Damages								
44 Injuries & Damages	REVCLAIM	230,368	175,295	8,621	0	19,104	14,545	5,065
45 Corporate Insurance Premiums Adj	REVCLAIM	8,021	6,103	300	0	665	506	186
46 Self Insurance Adjustment	REVCLAIM	6,756	5,141	253	0	560	427	154
47 Total Account 925		245,145	186,539	9,174	0	20,330	15,478	5,341

Bay State Gas Company

Attachment AG-22-44

Page 212 of 322

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

30-Jun-05 11:19 AM

PRODUCTION COMPONENTS

OPERATION & MAINT EXP CONT-13

ADMINISTRATIVE & GENERAL EXP

			HIGH WINTER LRG HI ANNUAL G-43 & T-43	LOW WINTER LOW ANNUAL G-50 & T-50	LOW WINTER MED ANNUAL G-51 & T-51	LOW WINTER HIGH ANNUAL G-52 & T-52	LOW WINTER LRG HI ANNUAL G-53 & T-53
		ALLOC					
1	Operation Expense	REVCLAIM	731	1,712	1,729	449	360
2	920-Administrative & General Salaries	REVCLAIM					
3	921-Office Supplies & Expenses	REVCLAIM	1,793	4,200	4,241	1,101	883
4	LDAC Unbilled Revenues Adj	REVCLAIM	(156)	(366)	(370)	(96)	(77)
5	Total Account 921		1,637	3,834	3,871	1,005	806
6		REVCLAIM	(1,597)	(3,740)	(3,777)	(981)	(786)
7	922-Administrative Exp Transferred-Cr						
8	923-Outside Services Employed						
9	Nisource Basis 1 - 50% Gross Plt	BASIS1P	761	280	774	227	288
10	N Basis 1 - 50% O&M Ex Gas Costs	BASIS1OM	1,191	5,333	4,251	729	501
11	Outside Services Nisource Basis 10	BASIS10	0	0	0	0	0
12	Outside Services Nisource Basis 11	BASIS11	317	140	338	99	121
13	Outside Services Nisource Basis 13	REVCLAIM	1,125	2,635	2,661	691	554
14	Out Serv Basis 13 - Facilities Mgt	PLANT	84	31	86	25	32
15	Out Serv Basis 13 - IT Billing	CUST903	0	0	0	0	0
16	Outside Services Nisource Basis 2	BASIS2	189	70	192	57	71
17	Outside Services Nisource Basis 20	BASIS20	1,038	2,291	2,359	615	503
18	Nisource Basis 7 - 50% Deprec Plt	BASIS7P	21	8	21	6	8
19	Nisource Basis 7 - 50% O&M	BASIS7OM	720	728	2,194	1,059	508
20	Outside Services Nisource Basis 9	BASIS9	15	6	16	5	6
21	Outside Services Nisource Co 12	BASCO12	659	1,405	1,542	416	314
22	Outside Serv Nisource Direct Billed						
23	BSG Communications	REVCLAIM	93	218	220	57	46
24	Regulatory External Affairs	REVCLAIM	138	324	327	85	68
25	Printing & Inserting	EXP903	0	0	0	0	0
26	Finance & Acctg & HR	REVCLAIM	137	322	325	84	68
27	Regulatory	REVCLAIM	156	364	368	96	77
28	Legal Energy Distr East	REVCLAIM	234	547	553	144	115
29	Fleet Management	LABOR	116	51	123	36	44
30	Nisource Retail Services	EXP879	0	0	0	0	0
31	On Outside Service - Direct Billed	REVCLAIM	753	1,765	1,782	463	371
32	Total Out Serv - Direct Billed		1,627	3,591	3,698	964	788
33	Outside Services Employed BSG	REVCLAIM	565	1,324	1,337	347	278
34	NIS Gas Dispatching & Control	DISTR	0	0	0	0	0
35	NIS Gas Acq & Dispat Costs - Sales	GASCOSTS	18,001	17,650	54,766	26,626	12,743
36	NIS Gas Acq & Dispat Costs - Trans	DISTR	0	0	0	0	0
37	Nisource Payroll & Benefits Adj	REVCLAIM	317	742	749	195	156
38	Nisource PBOP & Pension	PENSION	0	0	0	0	0
39	Nisource Charitable Contr Adj	REVCLAIM	(4)	(9)	(9)	(2)	(2)
40	DSM Implementation Expense Adj	REVCLAIM	(1,012)	(2,371)	(2,394)	(622)	(498)
41	Customer Choice Recoveries Adj	REVCLAIM	28	65	65	17	14
42	Total Account 923		25,641	33,918	72,647	31,453	16,384
43	924-Property Insurance	PLANT	0	0	0	0	0
44	925-Injuries & Damages						
45	Injuries & Damages	REVCLAIM	1,142	2,676	2,702	701	562
46	Corporate Insurance Premiums Adj	REVCLAIM	40	93	94	24	20
47	Self Insurance Adjustment	REVCLAIM	33	78	79	21	16
48	Total Account 925		1,215	2,847	2,875	746	598

Bay State Gas Company
D.T.E. 05-27
Attachment AG-22-44(1)
Page 213 of 322

PRODUCTION COMPONENTS

OPERATION & MAINT EXP CONT-14

ADMIN & GENERAL EXP CONT

	ALLOC	TOTAL COMPANY	RESIDENTIAL HEATING R-3 & R-4	RESIDENTIAL NON-HEATING R-1 & R-2	OUTDOOR LIGHTING	HIGH WINTER LOW ANNUAL G-40 & T-40	HIGH WINTER MED ANNUAL G-41 & T-41	HIGH WINTER HIGH ANNUAL G-42 & T-42
1 206-Employees Pensions & Benefits		345,106	242,511	2,801	0	29,355	41,836	16,338
2 206-Medical & Dental Benefits Adj		28,302	19,888	230	0	2,407	3,431	1,340
3 206-Pension & PBOP Expense		0	0	0	0	0	0	0
4 206-Total Account 926		373,408	262,399	3,031	0	31,763	45,267	17,678
5 928-Regulatory Commission Expenses		30,332	23,081	1,135	0	2,515	1,915	661
6 928-Regulatory Commission Expenses		28,006	21,311	1,048	0	2,323	1,768	610
7 928-Rate Case Expense Adj		58,338	44,391	2,183	0	4,838	3,683	1,271
8 928-Total Account 928		0	0	0	0	0	0	0
9 929-Duplicate Charges-Cr								
10 930-Miscellaneous General Exp		59,160	45,017	2,214	0	4,906	3,735	1,289
11 930-Miscellaneous General Exp		(12,434)	(9,462)	(465)	(0)	(1,031)	(785)	(271)
12 930-Charitable Contributions Adj		26,174	19,917	980	0	2,171	1,653	570
13 930-Research & Develop GRI/GTI Adj		72,900	55,472	2,728	0	6,046	4,603	1,588
14 931-Rentals								
15 931-Rentals - General & Admin		93,096	70,840	3,484	0	7,720	5,878	2,028
16 931-PLT397M		0	0	0	0	0	0	0
17 931-PLT397M		0	0	0	0	0	0	0
18 931-PLT386		0	0	0	0	0	0	0
19 931-PLT397E		0	0	0	0	0	0	0
20 931-Total Account 931		93,096	70,840	3,484	0	7,720	5,878	2,028
21 931-Total Operation Expense		3,869,712	2,779,831	100,300	12	299,240	340,360	135,540
22 Maintenance								
23 932 Maintenance of General Plant		71,856	50,494	583	0	6,112	8,711	3,402
24 932 Maintenance of General Plant		(42,298)	(29,723)	(343)	(0)	(3,598)	(5,128)	(2,002)
25 932-ERC Remediation Adj		29,558	20,771	240	0	2,514	3,583	1,399
26 932-Total Account 932		3,899,270	2,800,602	100,540	12	301,755	343,943	136,940
27 932-Total Administrative & General Exp								
28 932-Total Gas O&M Exp Before Other Adj		337,680,905	229,584,004	6,064,104	2,348	22,289,068	35,358,992	15,619,823
29 ADJUSTMENTS TO O&M EXPENSES								
30 932-Total Gas Operation & Maintenance Exp		337,680,905	229,584,004	6,064,104	2,348	22,289,068	35,358,992	15,619,823
31 Payroll - Union Adjustment		53,047	37,277	431	0	4,512	6,431	2,511
32 Payroll - Non-Union Adjustment		20,065	14,100	163	0	1,707	2,432	950
33 Incentive Compensation Adjustment		(5,625)	(3,953)	(46)	(0)	(478)	(682)	(266)
34 Gain on Sale of Property Adjustment		(10,390)	(7,247)	(57)	(0)	(886)	(1,314)	(516)
35 Farm Sales Adjustment		1,294	984	48	0	107	82	28
36 Inflation Adjustment		60,921	42,648	413	0	5,188	7,547	2,965
37 Total Adjusted Gas Oper & Maint Exp		337,800,216	229,667,813	6,065,056	2,348	22,299,218	35,373,488	15,636,386

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

30-Jun-05 11:19 AM

PRODUCTION COMPONENTS

OPERATION & MAINT EXP CONT-14

ADMIN & GENERAL EXP CONT

			HIGH WINTER LRG HI ANNUAL G-43 & T-43	LOW WINTER LOW ANNUAL G-50 & T-50	LOW WINTER MED ANNUAL G-51 & T-51	LOW WINTER HIGH ANNUAL G-52 & T-52	LOW WINTER LRG HI ANNUAL G-53 & T-53
	ALLOC						
1	LABOR	926-Employees Pensions & Benefits	3,832	1,689	4,089	1,190	1,465
2	LABOR	Medical & Dental Benefits Adj	314	139	335	98	120
3	PENSION	Pension & PBOP Expense	0	0	0	0	0
4		Total Account 926	4,146	1,827	4,424	1,287	1,585
5	REVCLAIM	928-Regulatory Commission Expenses					
6	REVCLAIM	Regulatory Commission Expenses	150	352	356	92	74
7		Rate Case Expense Adj	139	325	328	85	68
8	REVCLAIM	Total Account 928	289	678	684	178	142
9		929-Duplicate Charges-Cr	0	0	0	0	0
10	REVCLAIM	930-Miscellaneous General Exp					
11	REVCLAIM	Miscellaneous General Exp	293	687	694	180	144
12	REVCLAIM	Charitable Contributions Adj	(62)	(144)	(146)	(38)	(30)
13	REVCLAIM	Research & Develop GRI/GTI Adj	130	304	307	80	64
14		Total Account 930	361	847	855	222	178
15	REVCLAIM	931 Rents					
16	PLT397M	Rents - General & Admin	462	1,081	1,092	283	227
17	PLT397M	Metscan Lease Expense	0	0	0	0	0
18	PLT386	Metscan Lease Expense Adj	0	0	0	0	0
19	PLT397E	Water Heater Lease Expense	0	0	0	0	0
20		Iron Lease Payment Adj	0	0	0	0	0
21		Total Account 931	462	1,081	1,092	283	227
22		Total Operation Expense	32,886	43,004	84,400	34,644	19,494
23	GENPLT	Maintenance					
24	GENPLT	932 Maintenance of General Plant					
25	GENPLT	Maintenance of General Plant	798	352	851	248	305
26		ERC Remediation Adj	(470)	(207)	(501)	(146)	(180)
27		Total Account 932	328	145	350	102	125
28		Total Administrative & General Exp	33,214	43,149	84,750	34,745	19,619
29		Total Gas O&M Exp Before Other Adj	3,975,596	4,028,051	12,110,404	5,845,487	2,803,028
30		ADJUSTMENTS TO O&M EXPENSES					
31		Total Gas Operation & Maintenance Exp	3,975,596	4,028,051	12,110,404	5,845,487	2,803,028
32	OMLAB	Payroll - Union Adjustment	589	260	628	183	225
33	OMLAB	Payroll - Non-Union Adjustment	223	98	238	69	85
34	OMLAB	Incentive Compensation Adjustment	(62)	(28)	(67)	(19)	(24)
35	PLANT	Gain on Sale of Property Adjustment	(121)	(45)	(123)	(36)	(46)
36	REVCLAIM	Farm Sales Adjustment	6	15	15	4	3
37	OTHOMINF	Inflation Adjustment	694	279	722	211	264
38		Total Adjusted Gas Oper & Maint Exp	3,976,924	4,028,631	12,111,818	5,845,898	2,803,536

Bay State Gas Company
D.T.E. 05-27
Attachment AG-22-44(1)
Page 215 of 322

PRODUCTION COMPONENTS

DEPRECIATION & AMORT EXPENSE-15

DEPRECIATION & AMORTIZATION EXP

INTANGIBLE PLANT AMORTIZATION

1	301 Organization	PLT301	2,864	1,997	16	0	244	362	142
2	Organization	PLT301	(2,544)	(1,775)	(14)	(0)	(217)	(322)	(126)
3	Adj Organization		320	223	2	0	27	40	16
	Total Account 301								
4	303 Misc. Intangible Plant	PLT303	569,987	400,538	4,626	0	48,484	69,098	26,984
5	Misc. Intangible Plant	PLT303	(421,153)	(295,950)	(3,418)	(0)	(35,824)	(51,055)	(19,938)
6	Adj NipSCO Amortization		148,834	104,588	1,208	0	12,660	18,043	7,046
7	Total Account 303		149,153	104,811	1,210	0	12,687	18,083	7,062
	Total Intangible Plant Amortization								

PRODUCTION PLANT DEPRECIATION

8	305 Structures & Improvements	PLT305	51,758	36,059	263	0	4,414	6,586	2,587
9	311 L.P. Gas Equipment	PLT311	57,319	39,934	291	0	4,888	7,293	2,865
10	320 Other Equipment	PLT320	43,637	30,401	222	0	3,721	5,552	2,181
11	321 L.N.G. Equipment	PLT321	397,664	277,049	2,022	0	33,914	50,598	19,878
12	Total Production Plant Depreciation		550,378	383,443	2,798	0	46,938	70,029	27,512

DISTRIBUTION PLANT DEPRECIATION

13	365 Right of Way	PLT365	0	0	0	0	0	0	0
14	366 Structures & Improvements	PLT366	0	0	0	0	0	0	0
	367 Gas Mains								
15	Gas Mains - Bare Steel	PLT367BS	0	0	0	0	0	0	0
16	Gas Mains - Joint Clamping	PLT367JC	0	0	0	0	0	0	0
17	Gas Mains - Cast Iron	PLT367CI	0	0	0	0	0	0	0
18	Gas Mains - Cathodic Protection	PLT367CP	0	0	0	0	0	0	0
19	Gas Mains - Coated Steel	PLT367CS	0	0	0	0	0	0	0
20	Gas Mains - Plastic	PLT367P	0	0	0	0	0	0	0
21	Adj Gas Mains - Plastic	PLT367P	0	0	0	0	0	0	0
22	Total Account 367		0	0	0	0	0	0	0
23	368 Compressor Station Equipment	PLT368	0	0	0	0	0	0	0
24	369 Meas. & Reg. Station Equipment	PLT369	0	0	0	0	0	0	0
25	380 Gas Services	PLT380	0	0	0	0	0	0	0
26	381 Gas Meters	PLT381	0	0	0	0	0	0	0
27	382 Meter Installations	PLT382	0	0	0	0	0	0	0
28	383 Gas Regulators	PLT383	0	0	0	0	0	0	0
	386 Other Property on Cust's Premises								
29	Gas Water Heaters	PLT3860	0	0	0	0	0	0	0
30	Cascade Diamond Boilers	PLT3862	0	0	0	0	0	0	0
31	Conversion Burners	PLT3863	0	0	0	0	0	0	0
32	Total Account 386		0	0	0	0	0	0	0
33	387 Other Equipment	PLT387	0	0	0	0	0	0	0
34	Total Distribution Plant Depreciation		0	0	0	0	0	0	0

Bay State Gas Company
D.T.E. 05-27
Attachment AG-22-44(1)
Page 216 of 322

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

30-Jun-05 11:19 AM

PRODUCTION COMPONENTS

		ALLOC	HIGH WINTER LRG HI ANNUAL G-43 & T-43	LOW WINTER LOW ANNUAL G-50 & T-50	LOW WINTER MED ANNUAL G-51 & T-51	LOW WINTER HIGH ANNUAL G-52 & T-52	LOW WINTER LRG HI ANNUAL G-53 & T-53
DEPRECIATION & AMORT EXPENSE-15							
DEPRECIATION & AMORTIZATION EXP							
INTANGIBLE PLANT AMORTIZATION							
1	301 Organization	PLT301	33	12	34	10	13
2	Adj Organization	PLT301	(30)	(11)	(30)	(9)	(11)
3	Total Account 301		4	1	4	1	1
4	303 Misc. Intangible Plant	PLT303	6,329	2,790	6,753	1,965	2,419
5	Misc. Intangible Plant	PLT303	(4,677)	(2,061)	(4,989)	(1,452)	(1,788)
6	Adj Nipisco Amortization		1,653	728	1,763	513	632
7	Total Account 303		1,656	730	1,767	514	633
	Total Intangible Plant Amortization						
PRODUCTION PLANT DEPRECIATION							
8	305 Structures & Improvements	PLT305	608	217	614	181	229
9	311 L.P. Gas Equipment	PLT311	673	241	680	200	254
10	320 Other Equipment	PLT320	512	183	517	152	193
11	321 L.N.G. Equipment	PLT321	4,689	1,670	4,716	1,388	1,762
12	Total Production Plant Depreciation		6,461	2,311	6,527	1,920	2,439
DISTRIBUTION PLANT DEPRECIATION							
13	365 Right of Way	PLT365	0	0	0	0	0
14	366 Structures & Improvements	PLT366	0	0	0	0	0
	367 Gas Mains						
15	Gas Mains - Bare Steel	PLT367BS	0	0	0	0	0
16	Gas Mains - Joint Clamping	PLT367JC	0	0	0	0	0
17	Gas Mains - Cast Iron	PLT367CI	0	0	0	0	0
18	Gas Mains - Cathodic Protection	PLT367CP	0	0	0	0	0
19	Gas Mains - Coated Steel	PLT367CS	0	0	0	0	0
20	Gas Mains - Plastic	PLT367P	0	0	0	0	0
21	Adj Gas Mains - Plastic	PLT367P	0	0	0	0	0
22	Total Account 367		0	0	0	0	0
23	368 Compressor Station Equipment	PLT368	0	0	0	0	0
24	369 Meas. & Reg. Station Equipment	PLT369	0	0	0	0	0
25	380 Gas Services	PLT380	0	0	0	0	0
26	381 Gas Meters	PLT381	0	0	0	0	0
27	382 Meter Installations	PLT382	0	0	0	0	0
28	383 Gas Regulators	PLT383	0	0	0	0	0
	386 Other Property on Cust's Premises						
29	Gas Water Heaters	PLT3860	0	0	0	0	0
30	Cascade Diamond Boilers	PLT3862	0	0	0	0	0
31	Conversion Burners	PLT3863	0	0	0	0	0
32	Total Account 386		0	0	0	0	0
33	387 Other Equipment	PLT387	0	0	0	0	0
34	Total Distribution Plant Depreciation		0	0	0	0	0

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

30-Jun-05 11:19 AM

PRODUCTION COMPONENTS		ALLOC	TOTAL COMPANY	RESIDENTIAL HEATING R-3 & R-4	RESIDENTIAL NON-HEATING R-1 & R-2	OUTDOOR LIGHTING	HIGH WINTER LOW ANNUAL G-40 & T-40	HIGH WINTER MED ANNUAL G-41 & T-41	HIGH WINTER HIGH ANNUAL G-42 & T-42
DEPREC & AMORT EXP CONT-16									
TRANSMISSION PLANT DEPRECIATION									
1	379 Other Equipment	PLT379	0	0	0	0	0	0	0
2	Total Transmission Plant Depreciation		0	0	0	0	0	0	0
GENERAL PLANT DEPRECIATION									
3	390 Structures & Improvements	PLT390	5,858	4,116	48	0	498	710	277
4	Total General Plant Depreciation		5,858	4,116	48	0	498	710	277
GENERAL PLT DEPRECIATION (Equip)									
5	391 Office Equipment	PLT391OE	11,759	8,263	95	0	1,000	1,425	557
6	Office Equipment	PLT391IT	38,452	27,021	312	0	3,271	4,861	1,820
7	Total Account 391		50,210	35,283	408	0	4,271	6,087	2,377
8	392 Transportation Equipment	PLT392	12,520	8,798	102	0	1,065	1,518	593
9	393 Stores Equipment	PLT393	220	155	2	0	19	27	10
10	394 Tools, Shop & Garage Equipment	PLT394	3,112	2,187	25	0	265	377	147
11	396 Power Operated Equipment	PLT396	1,895	1,332	15	0	161	230	90
12	397 Communication Equipment	PLT397O	19,219	13,505	156	0	1,635	2,330	910
13	Communications Equipment Other	PLT397E	0	0	0	0	0	0	0
14	Communications Equip ERT/ITRON	PLT397M	0	0	0	0	0	0	0
15	Communications Equip Metscan		19,219	13,505	156	0	1,635	2,330	910
16	Total Account 397	PLT398	48	34	0	0	4	6	2
17	398 Miscellaneous Equipment		87,225	61,295	708	0	7,420	10,574	4,129
	Tot Gen Plt Depreciation (Equip)		(2,335)	(1,641)	(19)	(0)	(199)	(283)	(111)
18	Adj Depreciation Exp Alloc Mgt. Fee	GENPLT	0	0	0	0	0	0	0
19	Adj Amortization of Metscan Devices	PLT397M	0	0	0	0	0	0	0
20	Total Depreciation & Amortization Exp		790,280	552,024	4,744	0	67,344	99,113	38,870

Bay State Gas Company
D.T.E. 05-27
Attachment AG-22-44(1)
Page 218 of 322

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

30-Jun-05 11:19 AM

PRODUCTION COMPONENTS

DEPREC & AMORT EXP CONT-16

			HIGH WINTER LRG HI ANNUAL G-43 & T-43	LOW WINTER LOW ANNUAL G-50 & T-50	LOW WINTER MED ANNUAL G-51 & T-51	LOW WINTER HIGH ANNUAL G-52 & T-52	LOW WINTER LRG HI ANNUAL G-53 & T-53
	ALLOC						
TRANSMISSION PLANT DEPRECIATION							
1	379 Other Equipment	PLT379	0	0	0	0	0
2	Total Transmission Plant Depreciation		0	0	0	0	0
GENERAL PLANT DEPRECIATION							
3	390 Structures & Improvements	PLT390	65	29	69	20	25
4	Total General Plant Depreciation		65	29	69	20	25
GENERAL PLT DEPRECIATION (Equip)							
5	391 Office Equipment	PLT391OE	131	58	139	41	50
6	Office Equipment	PLT391IT	427	188	456	133	163
7	Office IT Equipment		558	246	595	173	213
	Total Account 391		139	61	148	43	53
8	392 Transportation Equipment	PLT392	2	1	3	1	1
9	393 Stores Equipment	PLT393	35	15	37	11	13
10	394 Tools, Shop & Garage Equipment	PLT394	21	9	22	7	8
11	396 Power Operated Equipment	PLT396					
	397 Communication Equipment		213	94	228	66	82
12	Communications Equipment Other	PLT397O	0	0	0	0	0
13	Communications Equip ERT/ITRON	PLT397E	0	0	0	0	0
14	Communications Equip Metscan	PLT397M	213	94	228	66	82
15	Total Account 397		1	0	1	0	0
16	398 Miscellaneous Equipment	PLT398	969	427	1,033	301	370
17	Tot Gen Plt Depreciation (Equip)		(26)	(11)	(28)	(8)	(10)
18	Adj Depreciation Exp Alloc Mgt. Fee	GENPLT					
19	Adj Amortization of Metscan Devices	PLT397M	0	0	0	0	0
20	Total Depreciation & Amortization Exp		9,126	3,485	9,369	2,748	3,457

PRODUCTION COMPONENTS

STATE & FED TAXES & OTH EXP-17

TAXES OTHER THAN INCOME

	ALLOC	TOTAL COMPANY	RESIDENTIAL HEATING R-3 & R-4	RESIDENTIAL NON-HEATING R-1 & R-2	OUTDOOR LIGHTING	HIGH WINTER LOW ANNUAL G-40 & T-40	HIGH WINTER MED ANNUAL G-41 & T-41	HIGH WINTER HIGH ANNUAL G-42 & T-42
Payroll Taxes								
1 Payroll Taxes	LABOR	94,786	66,607	769	0	8,063	11,491	4,487
2 Payroll Tax Adjustment	LABOR	3,480	2,445	28	0	296	422	165
3 Total Payroll Taxes		98,266	69,053	798	0	8,359	11,912	4,652
Plant Related Taxes								
Property Taxes								
4 Property Taxes	PLANT	180,006	125,550	986	0	15,346	22,762	8,936
5 Property Tax Adjustment	PLANT	7,909	5,516	43	0	674	1,000	393
6 Total Property Taxes		187,915	131,066	1,030	0	16,020	23,762	9,328
Other Taxes								
7 Other Taxes	PLANT	1,678	1,171	9	0	143	212	83
8 Other Tax Adjustment	PLANT	0	0	0	0	0	0	0
9 Total Other Taxes		1,678	1,171	9	0	143	212	83
10 Total Plant Related Taxes		189,593	132,237	1,039	0	16,164	23,975	9,412
Revenue Related Taxes								
11 Other State Taxes	REVCLAIM	3,871	2,945	145	0	321	244	84
12 Total Revenue Related Taxes		3,871	2,945	145	0	321	244	84
13 Total Taxes Other Than Income		291,729	204,235	1,981	0	24,843	36,132	14,148
FEDERAL & STATE INCOME TAXES								
14 State Tax @ 6.50%		41,574	33,699	(1,698)	0	2,345	5,415	1,398
15 Federal Tax @ 35.00%		209,311	169,663	(8,547)	0	11,807	27,261	7,038
16 Amortization of ITC		(9,513)	(6,635)	(52)	(0)	(811)	(1,203)	(472)
17 Deferred Tax Flowback		6,710	4,680	37	0	572	848	333
18 Total Income Tax Expense		248,082	201,407	(10,260)	0	13,914	32,321	8,297
19 INTEREST ON CUSTOMER DEPOSITS	TOTCDEP	0	0	0	0	0	0	0
20 Total Expenses		339,130,307	230,625,479	6,061,521	2,349	22,405,320	35,541,054	15,686,800
21 Net Operating Income		700,820	534,579	(12,743)	0	48,791	87,587	27,398

Bay State Gas Company
D.T.E. 05-27
Attachment AG-22-44(1)
Page 220 of 322

PRODUCTION COMPONENTS		ALLOC				HIGH WINTER LRG HI ANNUAL G-43 & T-43	LOW WINTER LOW ANNUAL G-50 & T-50	LOW WINTER MED ANNUAL G-51 & T-51	LOW WINTER HIGH ANNUAL G-52 & T-52	LOW WINTER LRG HI ANNUAL G-53 & T-53
STATE & FED TAXES & OTH EXP-17										
TAXES OTHER THAN INCOME										
Payroll Taxes										
1	Payroll Taxes	LABOR			1,053	464		1,123	327	402
2	Payroll Tax Adjustment	LABOR			39	17		41	12	15
3	Total Payroll Taxes				1,091	481		1,164	339	417
Plant Related Taxes										
Property Taxes										
4	Property Taxes	PLANT			2,098	772		2,134	627	793
5	Property Tax Adjustment	PLANT			92	34		94	28	35
6	Total Property Taxes				2,191	806		2,228	655	828
Other Taxes										
7	Other Taxes	PLANT			20	7		20	6	7
8	Other Tax Adjustment	PLANT			0	0		0	0	0
9	Total Other Taxes				20	7		20	6	7
10	Total Plant Related Taxes				2,210	813		2,248	661	836
Revenue Related Taxes										
11	Other State Taxes	REVCLAIM			19	45		45	12	9
12	Total Revenue Related Taxes				19	45		45	12	9
13	Total Taxes Other Than Income				3,320	1,339		3,458	1,011	1,262
FEDERAL & STATE INCOME TAXES										
14	State Tax @ 6.50%				(30)	(78)		87	174	260
15	Federal Tax @ 35.00%				(149)	(391)		440	878	1,311
16	Amortization of ITC				(111)	(41)		(113)	(33)	(42)
17	Deferred Tax Flowback				78	29		80	23	30
18	Total Income Tax Expense				(212)	(481)		494	1,043	1,559
19	INTEREST ON CUSTOMER DEPOSITS	TOTCDEP			0	0		0	0	0
20	Total Expenses				3,989,159	4,032,974		12,125,138	5,850,700	2,809,814
21	Net Operating Income				3,074	1,019		4,646	2,743	3,727

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

30-Jun-05 11:19 AM

PRODUCTION COMPONENTS

DEVELOPMENT OF INCOME TAXES-18

FEDERAL & STATE TAX CALCULATION

	ALLOC	TOTAL COMPANY	RESIDENTIAL HEATING R-3 & R-4	RESIDENTIAL NON-HEATING R-1 & R-2	OUTDOOR LIGHTING	HIGH WINTER LOW ANNUAL G-40 & T-40	HIGH WINTER MED ANNUAL G-41 & T-41	HIGH WINTER HIGH ANNUAL G-42 & T-42
1 Operating Revenues		339,831,128	231,160,058	6,048,778	2,349	22,454,110	35,628,641	15,714,198
Operating Expenses								
2 Operation & Maintenance Expense		337,800,216	229,667,813	6,065,056	2,348	22,299,218	35,373,488	15,625,486
3 Depreciation & Amortization Expense		790,280	552,024	4,744	0	67,344	99,113	38,870
4 Taxes Other Than Income		291,729	204,235	1,981	0	24,843	36,132	14,148
Interest Expense								
5 Interest on Customer Deposits		0	0	0	0	0	0	0
6 Interest Expense		309,296	217,534	3,114	0	26,624	36,605	14,188
7 Book Taxable Income		639,606	518,452	(26,118)	0	36,081	83,303	21,506
Adjustments to Taxable Income								
10 Deductions	PLANT	0	0	0	0	0	0	0
11 Taxable Basis State Franchise Tax		639,606	518,452	(26,118)	0	36,081	83,303	21,506
Less:								
12 State Tax @ 6.50%		41,574	33,699	(1,698)	0	2,345	5,415	1,398
13 Federal Taxable Basis		598,031	484,752	(24,420)	0	33,735	77,888	20,108
14 Federal Income Tax @ 35.00%		209,311	169,663	(8,547)	0	11,807	27,261	7,038
15 Federal Income Tax Liability		209,311	169,663	(8,547)	0	11,807	27,261	7,038
16 Amortization of ITC	PLANT	(9,513)	(6,635)	(52)	(0)	(811)	(1,203)	(472)
17 Deferred Tax Flowback	PLANT	6,710	4,680	37	0	572	848	333
18 Total Income Tax Expense		248,082	201,407	(10,260)	0	13,914	32,321	8,297
19 Net Income After Tax		700,820	534,579	(12,743)	0	48,791	87,587	27,398

Effective State Tax Rate	6.50%
Federal Tax Rate - Current	35.00%
1 - Incremental Tax Rate	0.60775
Incremental Tax Rate	0.39225
Effective Incremental Federal Rate	0.32725
Factor for Taxable Basis	1.64541
Interest Expense Percentage	2.85%
Purchased Gas Working Capital %	11.564%
Other O&M Working Capital %	0.00%

Bay State Gas Company
D.T.E. 05-27
Attachment AG-22-44(1)
Page 222 of 322

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

30-Jun-05 11:19 AM

PRODUCTION COMPONENTS

ALLOC

DEVELOPMENT OF INCOME TAXES-18

FEDERAL & STATE TAX CALCULATION

1	Operating Revenues		4,033,993	12,129,784	5,853,443	2,813,541
2	Operating Expenses					
3	Operation & Maintenance Expense	HIGH WINTER LRG HI ANNUAL G-43 & T-43				
4	Depreciation & Amortization Expense		4,028,631	12,111,818	5,845,898	2,803,536
5	Taxes Other Than Income		3,485	9,369	2,748	3,457
6	Interest Expense		1,339	3,458	1,011	1,262
7	Interest on Customer Deposits		0	0	0	0
8	Interest Expense		1,733	3,796	1,102	1,280
9	Book Taxable Income		(1,195)	1,343	2,884	4,006
10	Adjustments to Taxable Income		0	0	0	0
11	Deductions	PLANT	(1,195)	1,343	2,884	4,006
12	Taxable Basis State Franchise Tax		(78)	87	174	260
13	Less: State Tax @ 6.50%		(1,117)	1,256	2,510	3,745
14	Federal Taxable Basis		(391)	440	878	1,311
15	Federal Income Tax @ 35.00%		(391)	440	878	1,311
16	Federal Income Tax Liability		(41)	(113)	(33)	(42)
17	Amortization of ITC	PLANT	29	80	23	30
18	Deferred Tax Flowback	PLANT	(481)	494	1,043	1,559
19	Total Income Tax Expense		1,019	4,646	2,743	3,727
20	Net Income After Tax					

Bay State Gas Company
D.T.E. 05-27
Attachment AG-22-44(1)
Page 223 of 322

Effective State Tax Rate
Federal Tax Rate - Current
1 - Incremental Tax Rate
Incremental Tax Rate
Effective Incremental Federal Rate
Factor for Taxable Basis
Interest Expense Percentage
Purchased Gas Working Capital %
Other O&M Working Capital %

PRODUCTION COMPONENTS		DEVELOPMENT OF LABOR ALLOC-19									
		ALLOC	TOTAL COMPANY	RESIDENTIAL HEATING R-3 & R-4	RESIDENTIAL NON-HEATING R-1 & R-2	OUTDOOR LIGHTING	HIGH WINTER LOW ANNUAL G-40 & T-40	HIGH WINTER MED ANNUAL G-41 & T-41	HIGH WINTER HIGH ANNUAL G-42 & T-42		
DEVELOPMENT OF LABOR ALLOCATOR											
LIQUEFIED PROPANE PROD LABOR											
1	Operation Labor		29,153	20,310	148	0	2,486	3,709	1,457		
2	710-Supervision	LABPO									
3	717-LPG Gas Expenses	EXP717	245	171	1	0	21	31	12		
4	719-Handling Expense	EXP719	11,080	7,706	56	0	943	1,407	553		
5	735-Miscellaneous Production Exp	EXP735	86,849	60,507	442	0	7,407	11,051	4,341		
6	Total Operation Labor		127,307	88,694	647	0	10,857	16,198	6,364		
Maintenance Labor											
7	740-Supervision	LABPM	6,968	4,854	35	0	594	887	348		
8	741-Maintenance of Struct & Improv	EXP741	3,124	2,177	16	0	266	398	156		
9	742-Maintenance of Production Equip	EXP742	31,025	21,615	158	0	2,646	3,948	1,551		
10	Total Maintenance Labor		41,117	28,646	209	0	3,507	5,232	2,055		
	Total Liquefied Propane Prod Labor		168,424	117,340	856	0	14,364	21,430	8,419		
LIQUEFIED NATURAL GAS LABOR											
11	Operation Labor		323,903	225,660	1,647	0	27,623	41,213	16,191		
12	750-Supervision	LABLO									
13	754-Liquefaction Expense	EXP754	92,906	64,727	472	0	7,923	11,821	4,644		
14	757-Vaporization Expense	EXP757	16,441	11,455	84	0	1,402	2,092	822		
15	759-Handling Expense	EXP759	14,526	10,120	74	0	1,239	1,848	726		
16	775-Miscellaneous Production Exp	EXP775	262,525	182,899	1,335	0	22,389	33,403	13,123		
17	777-Lease Expense	EXP777	0	0	0	0	0	0	0		
	Total Operation Labor		710,302	494,860	3,611	0	60,577	90,377	35,506		
Maintenance Labor											
18	780-Supervision	LABLM	4,558	3,175	23	0	389	580	228		
19	781-Maintenance of Struct & Improv	EXP781	2,874	2,002	15	0	245	366	144		
20	782-Maintenance of Production Equip	EXP782	75,780	52,795	385	0	6,463	9,642	3,788		
21	Total Maintenance Labor		83,211	57,973	423	0	7,096	10,588	4,159		
22	Total Liquefied Natural Gas Prod Labor		793,513	552,833	4,034	0	67,673	100,965	39,665		
23	Total Production Labor		961,937	670,172	4,890	0	82,037	122,395	48,084		

PRODUCTION COMPONENTS		ALLOC				HIGH WINTER LRG HI ANNUAL G-43 & T-43	LOW WINTER LOW ANNUAL G-50 & T-50	LOW WINTER MED ANNUAL G-51 & T-51	LOW WINTER HIGH ANNUAL G-52 & T-52	LOW WINTER LRG HI ANNUAL G-53 & T-53
DEVELOPMENT OF LABOR ALLOC-19										
DEVELOPMENT OF LABOR ALLOCATOR										
LIQUEFIED PROPANE PROD LABOR										
1	Operation Labor									
2	710-Supervision	LABPO	342	122	346	102				129
3	717-LPG Gas Expenses	EXP717	3	1	3	1				1
4	719-Handling Expense	EXP719	130	46	131	39				49
5	735-Miscellaneous Production Exp	EXP735	1,020	365	1,030	303				385
6	Total Operation Labor		1,495	534	1,510	444				564
7	Maintenance Labor									
8	740-Supervision	LABPM	82	29	83	24				31
9	741-Maintenance of Struct & Improv	EXP741	37	13	37	11				14
10	742-Maintenance of Production Equip	EXP742	364	130	368	108				137
11	Total Maintenance Labor		483	173	488	143				182
12	Total Liquefied Propane Prod Labor		1,977	707	1,997	588				746
LIQUEFIED NATURAL GAS LABOR										
13	Operation Labor									
14	750-Supervision	LABLO	3,803	1,360	3,841	1,130				1,435
15	754-Liquefaction Expense	EXP754	1,091	390	1,102	324				412
16	757-Vaporization Expense	EXP757	193	69	195	57				73
17	759-Handling Expense	EXP759	171	61	172	51				64
18	775-Miscellaneous Production Exp	EXP775	3,082	1,102	3,113	916				1,163
19	777-Lease Expense	EXP777	0	0	0	0				0
20	Total Operation Labor		8,339	2,982	8,424	2,478				3,148
21	Maintenance Labor									
22	780-Supervision	LABLM	54	19	54	16				20
23	781-Maintenance of Struct & Improv	EXP781	34	12	34	10				13
24	782-Maintenance of Production Equip	EXP782	890	318	899	264				336
25	Total Maintenance Labor		977	349	987	290				369
26	Total Liquefied Natural Gas Prod Labor		9,316	3,332	9,410	2,769				3,516
27	Total Production Labor		11,293	4,039	11,408	3,356				4,263

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

30-Jun-05 11:19 AM

PRODUCTION COMPONENTS

DEVEL OF LABOR ALLOC CONT-20

TRANSMISSION & DISTRIB LABOR

		ALLOC	TOTAL COMPANY	RESIDENTIAL HEATING R-3 & R-4	RESIDENTIAL NON-HEATING R-1 & R-2	OUTDOOR LIGHTING	HIGH WINTER LOW ANNUAL G-40 & T-40	HIGH WINTER MED ANNUAL G-41 & T-41	HIGH WINTER HIGH ANNUAL G-42 & T-42
1	Operation Labor								
2	LABDO		0	0	0	0	0	0	0
3	850-Operation Supervision & Engineer	EXP851	0	0	0	0	0	0	0
4	851-System Control & Load Dispatch	EXP852	0	0	0	0	0	0	0
5	852-Communication System Exp	EXP857	0	0	0	0	0	0	0
6	857-Measuring & Regulating Stat Exp	EXP874	0	0	0	0	0	0	0
7	874-Mains and Services Exp	EXP878	0	0	0	0	0	0	0
8	878-Meter & House Regulator Exp	EXP879	0	0	0	0	0	0	0
9	879-Customer Installations Exp	EXP880	0	0	0	0	0	0	0
10	880-Other Expenses	EXP881	0	0	0	0	0	0	0
11	Total Operation Labor		0	0	0	0	0	0	0
12	Maintenance Labor								
13	LABDM		0	0	0	0	0	0	0
14	885-Supervision	EXP886	0	0	0	0	0	0	0
15	886-Maintenance of Struct & Improv	EXP887	0	0	0	0	0	0	0
16	887-Maintenance of Mains	EXP888	0	0	0	0	0	0	0
17	888-Maint of Compressor Station Equip	EXP889	0	0	0	0	0	0	0
18	889-Maint of Meas & Reg Station Equip	EXP892	0	0	0	0	0	0	0
19	892-Maintenance of Services	EXP893	0	0	0	0	0	0	0
20	893-Maint of Meters and House Regul	EXP894	0	0	0	0	0	0	0
21	894-Maintenance of Other Equipment		0	0	0	0	0	0	0
22	Total Maintenance Labor		0	0	0	0	0	0	0
23	Total Transmission and Distribution Labor		0	0	0	0	0	0	0

Bay State Gas Company
D.T.E. 05-27
Attachment AG-22-44(1)
Page 226 of 322

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

30-Jun-05 11:19 AM

PRODUCTION COMPONENTS

DEVEL OF LABOR ALLOC CONT-20

TRANSMISSION & DISTRIB LABOR

				LOW WINTER LOW ANNUAL G-50 & T-50	LOW WINTER MED ANNUAL G-51 & T-51	LOW WINTER HIGH ANNUAL G-52 & T-52	LOW WINTER LRG HI ANNUAL G-53 & T-53	
		ALLOC	HIGH WINTER LRG HI ANNUAL G-43 & T-43					
1	Operation Labor	LABDO	0	0	0	0	0	0
2	850-Operation Supervision & Engineer	EXP851	0	0	0	0	0	0
3	851-System Control & Load Dispatch	EXP852	0	0	0	0	0	0
4	852-Communication System Exp	EXP857	0	0	0	0	0	0
5	857-Measuring & Regulating Stat Exp	EXP874	0	0	0	0	0	0
6	874-Mains and Services Exp	EXP878	0	0	0	0	0	0
7	878-Meter & House Regulator Exp	EXP879	0	0	0	0	0	0
8	879-Customer Installations Exp	EXP880	0	0	0	0	0	0
9	880-Other Expenses	EXP881	0	0	0	0	0	0
10	881-Rents		0	0	0	0	0	0
	Total Operation Labor							
	Maintenance Labor	LABDM	0	0	0	0	0	0
11	885-Supervision	EXP886	0	0	0	0	0	0
12	886-Maintenance of Struct & Improv	EXP887	0	0	0	0	0	0
13	887-Maintenance of Mains	EXP888	0	0	0	0	0	0
14	888-Maint of Compressor Station Equip	EXP889	0	0	0	0	0	0
15	889-Maint of Meas & Reg Station Equip	EXP892	0	0	0	0	0	0
16	892-Maintenance of Services	EXP893	0	0	0	0	0	0
17	893-Maint of Meters and House Regul	EXP894	0	0	0	0	0	0
18	894-Maintenance of Other Equipment		0	0	0	0	0	0
19	Total Maintenance Labor							
20	Total Transmission and Distribution Labor		0	0	0	0	0	0

Bay State Gas Company
D.T.E. 05-27
Attachment AG-22-44(1)
Page 227 of 322

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

30-Jun-05 11:19 AM

PRODUCTION COMPONENTS

DEVEL OF LABOR ALLOC CONT-21

		ALLOC	TOTAL COMPANY	RESIDENTIAL HEATING R-3 & R-4	RESIDENTIAL NON-HEATING R-1 & R-2	OUTDOOR LIGHTING	HIGH WINTER LOW ANNUAL G-40 & T-40	HIGH WINTER MED ANNUAL G-41 & T-41	HIGH WINTER HIGH ANNUAL G-42 & T-42
CUSTOMER ACCOUNTS LABOR									
1	901-Supervision	LABCA	0	0	0	0	0	0	0
2	902-Meter Reading Expenses	EXP902	0	0	0	0	0	0	0
3	903-Cust Records & Collection Exp	EXP903	0	0	0	0	0	0	0
4	Total Customer Accounts Labor		0	0	0	0	0	0	0
SALES EXPENSES LABOR									
5	911-Supervision	LABSA	0	0	0	0	0	0	0
6	912-Demonstrating & Selling Exp	EXP912	0	0	0	0	0	0	0
7	913-Advertising Exp	EXP913	0	0	0	0	0	0	0
8	916-Miscellaneous Sales Exp	EXP916	0	0	0	0	0	0	0
9	Total Sales Expenses Labor		0	0	0	0	0	0	0

Bay State Gas Company
D.T.E. 05-27
Attachment AG-22-44(1)
Page 228 of 322

PRODUCTION COMPONENTS

DEVEL OF LABOR ALLOC CON'T-21

ALLOC

HIGH WINTER
LRG HI ANNUAL
G-43 & T-43

LOW WINTER
LARG HI ANNUAL
G-53 & T-53

LOW WINTER
HIGH ANNUAL
G-52 & T-52

LOW WINTER
MED ANNUAL
G-51 & T-51

LOW WINTER
LOW ANNUAL
G-50 & T-50

1	901-Supervision
2	902-Meter Reading Expenses
3	903-Cust Records & Collection Exp
4	Total Customer Accounts Labor

○ ○ ○ ○

SALES EXPENSES LABOR

5	911-Supervision
6	912-Demonstrating & Selling Exp
7	913-Advertising Exp
8	916-Miscellaneous Sales Exp
9	Total Sales Expenses Labor



○ ○ ○ ○ ○

○ ○ ○ ○ ○

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

30-Jun-05 11:19 AM

PRODUCTION COMPONENTS

DEVELOPMENT OF LABOR ALLOC CONT-22

ADMINISTRATIVE & GENERAL LABOR

	ALLOCA	TOTAL COMPANY	RESIDENTIAL HEATING R-3 & R-4	RESIDENTIAL NON-HEATING R-1 & R-2	OUTDOOR LIGHTING	HIGH WINTER LOW ANNUAL G-40 & T-40	HIGH WINTER MED ANNUAL G-41 & T-41	HIGH WINTER HIGH ANNUAL G-42 & T-42
1	EXP920	87,528	66,603	3,276	0	7,259	5,526	1,907
2	EXP921	480	365	18	0	40	30	10
3	EXP922	0	0	0	0	0	0	0
4	EXP923	28	20	1	0	2	2	1
5	EXP924	0	0	0	0	0	0	0
6	EXP925	2,014	1,533	75	0	167	127	44
7	EXP926	337	237	3	0	29	41	16
8	EXP928	0	0	0	0	0	0	0
9	EXP929	0	0	0	0	0	0	0
10	EXP930	9,511	7,237	356	0	789	601	207
11	EXP931	0	0	0	0	0	0	0
12	Total Operation Labor	99,899	75,996	3,728	0	8,285	6,328	2,186
	Maintenance Labor							
13	EXP932	10,397	7,306	84	0	884	1,260	492
14	Total Administrative & General Labor	110,296	83,302	3,813	0	9,169	7,588	2,678
15	Total Gas Operation & Maintenance Labor	1,072,233	753,474	8,703	0	91,206	129,983	50,762
	CONSTRUCTION LABOR CAPITALIZED							
16	Distribution Related							
17	PLT397M	0	0	0	0	0	0	0
18	PLT397E	0	0	0	0	0	0	0
19	Conversion Burners	0	0	0	0	0	0	0
20	Total Capitalized Labor	0	0	0	0	0	0	0
21	Sum of Allocated Labor Expense	1,072,233	753,474	8,703	0	91,206	129,983	50,762

Bay State Gas Company
D.T.E. 05-27
Attachment AG-22-44(1)
Page 230 of 322

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

30-Jun-05 11:19 AM

PRODUCTION COMPONENTS

DEVELOPMENT OF LABOR ALLOC CONT-22

ADMINISTRATIVE & GENERAL LABOR

			HIGH WINTER LRG HI ANNUAL G-43 & T-43	LOW WINTER LOW ANNUAL G-50 & T-50	LOW WINTER MED ANNUAL G-51 & T-51	LOW WINTER HIGH ANNUAL G-52 & T-52	LOW WINTER LRG HI ANNUAL G-53 & T-53
1	Operation Labor	EXP920	434	1,017	1,026	266	214
2	920-Administrative & General Salaries	EXP921	2	6	6	1	1
3	921-Office Supplies & Expenses	EXP922	0	0	0	0	0
4	922-Administrative Exp Transferred-Cr	EXP923	0	0	1	0	0
5	923-Outside Services Employed	EXP924	0	0	0	0	0
6	924-Property Insurance	EXP925	10	23	24	6	5
7	925-Injuries & Damages	EXP926	4	2	4	1	1
8	926-Employees Pensions & Benefits	EXP928	0	0	0	0	0
9	928-Regulatory Commission Expenses	EXP929	0	0	0	0	0
10	929-Duplicate Charges-Cr	EXP930	47	110	112	29	23
11	930-Miscellaneous General Exp	EXP931	0	0	0	0	0
12	931 Rents		497	1,158	1,172	305	245
	Total Operation Labor						
	Maintenance Labor						
13	932 Maintenance of General Plant	EXP932	115	51	123	36	44
14	Total Administrative & General Labor		613	1,209	1,295	340	289
15	Total Gas Operation & Maintenance Labor		11,906	5,248	12,703	3,697	4,551

CONSTRUCTION LABOR CAPITALIZED

16	Distribution Related						
17	Distribution/Transmission	DISTR	0	0	0	0	0
18	Metscan	PLT397M	0	0	0	0	0
19	ERT	PLT397E	0	0	0	0	0
20	Conversion Burners	CUST3863	0	0	0	0	0
	Total Capitalized Labor		0	0	0	0	0
21	Sum of Allocated Labor Expense		11,906	5,248	12,703	3,697	4,551

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

30-Jun-05 11:19 AM

PRODUCTION COMPONENTS

REVENUE REQUIREMENTS-23

PRESENT RATES

1	Rate Base	10,852,504	7,632,783	109,280	1	934,158	1,284,396	497,840
2	Net Operating Income (Present Rates)	700,820	534,579	(12,743)	0	48,791	87,587	27,398
3	Rate of Return (Present Rates)	6.46%	7.00%	-11.66%	11.24%	5.22%	6.82%	5.50%
4	Relative Rate of Return	1.000	1.085	-1.806	1.740	0.809	1.056	0.852
5	Sales Revenues (Present Rates)	338,914,239	230,848,852	6,046,507	2,349	22,258,198	35,408,497	15,643,522
6	Annual Booked Therm Sales	365,949,048	247,703,740	6,394,258	2,728	23,311,210	38,636,479	17,483,688
7	Sale Revenue \$/Therm (Present Rates)	\$0.9261	\$0.9320	\$0.9456	\$0.8610	\$0.9549	\$0.9165	\$0.8947

CLAIMED RATE OF RETURN

8	Claimed Rate of Return	9.05%	9.05%	9.05%	9.05%	9.05%	9.05%	9.05%
9	Return Req for Claimed Rate of Return	982,152	690,767	9,890	0	84,541	116,238	45,055
10	Sales Revenue Required Claimed ROR	339,377,146	231,105,846	6,083,748	2,349	22,318,023	35,455,639	15,672,575
11	Revenue Deficiency Sales Revenues	462,907	256,994	37,241	(0)	58,825	47,142	29,052
12	Percent Increase Required	0.14%	0.11%	0.62%	0.00%	0.26%	0.13%	0.19%
13	Annual Booked Therm Sales	365,949,048	247,703,740	6,394,258	2,728	23,311,210	38,636,479	17,483,688
14	Sales Revenue Required \$/Therm	\$0.9274	\$0.9330	\$0.9514	\$0.8610	\$0.9574	\$0.9177	\$0.8964
15	Revenue Deficiency \$/Therm	\$0.0013	\$0.0010	\$0.0058	\$0.0000	\$0.0025	\$0.0012	\$0.0017

Bay State Gas Company
D.T.E. 05-27
Attachment AG-22-44(1)
Page 232 of 322

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

30-Jun-05 11:19 AM

PRODUCTION COMPONENTS

ALLOC	HIGH WINTER LRG HI ANNUAL G-43 & T-43	LOW WINTER LOW ANNUAL G-50 & T-50	LOW WINTER MED ANNUAL G-51 & T-51	LOW WINTER HIGH ANNUAL G-52 & T-52	LOW WINTER LRG HI ANNUAL G-53 & T-53
-------	---	---	---	--	--

REVENUE REQUIREMENTS-23

PRESENT RATES

1	Rate Base	116,432	60,819	133,201	38,667	44,927
2	Net Operating Income (Present Rates)	3,074	1,019	4,646	2,743	3,727
3	Rate of Return (Present Rates)	2.64%	1.68%	3.49%	7.09%	8.30%
4	Relative Rate of Return	0.409	0.259	0.540	1.099	1.285
5	Sales Revenues (Present Rates)	3,977,774	4,004,942	12,077,379	5,837,083	2,808,137
6	Annual Booked Therm Sales	4,431,946	4,446,204	13,718,907	6,665,891	3,153,997
7	Sale Revenue \$/Therm (Present Rates)	\$0.8975	\$0.9008	\$0.8803	\$0.8757	\$0.8903

CLAIMED RATE OF RETURN

8	Claimed Rate of Return	9.05%	9.05%	9.05%	9.05%	9.05%
9	Return Req for Claimed Rate of Return	10,537	5,504	12,055	3,499	4,066
10	Sales Revenue Required Claimed ROR	3,990,054	4,012,321	12,089,570	5,838,327	2,808,694
11	Revenue Deficiency Sales Revenues	12,280	7,380	12,191	1,244	557
12	Percent Increase Required	0.31%	0.18%	0.10%	0.02%	0.02%
13	Annual Booked Therm Sales	4,431,946	4,446,204	13,718,907	6,665,891	3,153,997
14	Sales Revenue Required \$/Therm	\$0.9003	\$0.9024	\$0.8812	\$0.8759	\$0.8905
15	Revenue Deficiency \$/Therm	\$0.0028	\$0.0017	\$0.0009	\$0.0002	\$0.0002

[illegible]

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

30-Jun-05 11:19 AM

PRODUCTION COMPONENTS

ALLOCATION FACTOR TABLE-24

ALLOC HIGH WINTER
LRG HI ANNUAL
G-43 & T-43

LOW WINTER
LOW ANNUAL
G-50 & T-50

LOW WINTER
MED ANNUAL
G-51 & T-51

LOW WINTER
HIGH ANNUAL
G-52 & T-52

LOW WINTER
LRG HI ANNUAL
G-53 & T-53

DEMAND RELATED

1 PRODUCTION ALLOCATORS

2 Design Day Remaining Demands - Sales
3 LPG Production Allocator - Prod Function
4 LNG Production Allocator - Prod Function
5 LPG & LNG Prod Alloc - Distr Function
6 LPG & LNG Distr Pressure Support %

7
8 Design Day Base Demands - Sales Cust
9 Design Day Remaining Demands - Sales
10 Total Design Day Sendout - Sales Cust
11
12

13 GAS COST ALLOCATORS

14 Base Demand Gas Costs
15 Remaining Demand Gas Costs
16
17
18

DBASE
DREMAIN

DISTRIBUTION ALLOCATORS

1 Distribution Allocator
2

3 Pension & PBOP Expense Allocator
4

DISTR
PENSION

1,551 4,381 1,289 1,637
1,551 4,381 1,289 1,637
1,551 4,381 1,289 1,637
0.8514% 3.4292% 3.9918% 7.9364%

874 2,853 1,598 414
1,551 4,381 1,289 1,637
2,425 7,234 2,887 2,051

195,298 638,567 342,813 92,342
192,307 543,192 159,796 203,086

0.8514% 3.4292% 3.9918% 7.9364%
2,516,064 4,358,376 3,576,860 5,791,979

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

30-Jun-05 11:19 AM

PRODUCTION COMPONENTS

ALLOCATION FACTOR TABLE CONT-25

	COMMODITY RELATED	ALOC	TOTAL COMPANY	RESIDENTIAL HEATING R-3 & R-4	RESIDENTIAL NON-HEATING R-1 & R-2	OUTDOOR LIGHTING	HIGH WINTER LOW ANNUAL G-40 & T-40	HIGH WINTER MED ANNUAL G-41 & T-41	HIGH WINTER HIGH ANNUAL G-42 & T-42
1	Base Commodity Gas Costs	EBASE	80,774,205	49,657,716	3,867,284	2,167	2,158,849	4,619,659	2,632,837
2	Remaining Commodity Gas Costs	EREMAIN	191,688,704	134,395,424	1,128,159	0	14,855,080	23,713,567	10,221,852
3									
4									
5									
6									
7	Annual Therm Firm Sales		365,949,048	247,703,740	6,394,258	2,728	23,311,210	38,636,479	17,483,688
8	Annual Therm Firm Transportation		127,549,264	79,549	1,908	0	1,900,026	15,524,113	26,651,718
9	Total Annual Therm Firm Throughput		493,498,312	247,783,289	6,396,166	2,728	25,211,236	54,160,592	44,135,406
10									
11	Annual Base Therm - Sales Actual		378,169,527	256,470,043	6,394,258	2,728	24,381,470	40,254,087	18,083,791
12	Weather Normalization Adj Base -Sales		(12,220,479)	(8,766,303)	0	0	(1,070,260)	(1,617,608)	(600,103)
13									
14	Annual Base Therm - Trans Actual		129,319,171	81,962	1,908	0	1,982,789	16,124,058	27,584,660
15	Weather Normalization Adj Base -Trans		(1,769,907)	(2,413)	0	0	(82,763)	(599,945)	(932,942)
16									
17	Annual Therm Firm Sales Sendout		369,645,503	250,205,798	6,458,846	2,756	23,546,677	39,026,746	17,660,291
18	Annual Therm Firm Trans Sendout		128,837,641	80,353	1,927	0	1,919,218	15,680,922	26,920,927
19	Tot Ann Therm Firm Throughput Sendout		498,483,144	250,286,151	6,460,773	2,756	25,465,895	54,707,668	44,581,218
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
31									
32									
33									
34									
35									

Bay State Gas Company
D.T.E. 05-27
Attachment AG-22-44(1)
Page 236 of 322

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

30-Jun-05 11:19 AM

PRODUCTION COMPONENTS

ALLOC

HIGH WINTER
LRG HI ANNUAL
G-43 & T-43LOW WINTER
LOW ANNUAL
G-50 & T-50LOW WINTER
MED ANNUAL
G-51 & T-51LOW WINTER
HIGH ANNUAL
G-52 & T-52LOW WINTER
LRG HI ANNUAL
G-53 & T-53

ALLOCATION FACTOR TABLE CONT-25

COMMODITY RELATED

1	Base Commodity Gas Costs	EBASE	1,577,413	2,506,976	8,208,799	4,357,592	1,184,913
2	Remaining Commodity Gas Costs	EREMAIN	1,678,560	945,632	2,525,235	933,008	1,292,187
3							
4							
5							
6							
7	Annual Therm Firm Sales		4,431,946	4,446,204	13,718,907	6,665,891	3,153,997
8	Annual Therm Firm Transportation		5,036,085	797,782	7,650,476	18,839,377	51,068,230
9	Total Annual Therm Firm Throughput		9,468,031	5,243,986	21,369,383	25,505,268	54,222,227
10							
11	Annual Base Therm - Sales Actual		4,598,151	4,446,204	13,718,907	6,665,891	3,153,997
12	Weather Normalization Adj Base -Sales		(166,205)	0	0	0	0
13							
14	Annual Base Therm - Trans Actual		5,187,929	797,782	7,650,476	18,839,377	51,068,230
15	Weather Normalization Adj Base -Trans		(151,844)	0	0	0	0
16							
17	Annual Therm Firm Sales Sendout		4,476,713	4,491,115	13,857,482	6,733,223	3,185,856
18	Annual Therm Firm Trans Sendout		5,086,955	805,840	7,727,754	19,029,674	51,584,071
19	Tot Ann Therm Firm Throughput Sendout		9,563,668	5,296,955	21,585,236	25,762,897	54,769,927
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

30-Jun-05 11:19 AM

PRODUCTION COMPONENTS

ALLOCATION FACTOR TABLE CONT-26

CUSTOMER RELATED

	ALLOC	TOTAL COMPANY	RESIDENTIAL HEATING R-3 & R-4	RESIDENTIAL NON-HEATING R-1 & R-2	OUTDOOR LIGHTING	HIGH WINTER LOW ANNUAL G-40 & T-40	HIGH WINTER MED ANNUAL G-41 & T-41	HIGH WINTER HIGH ANNUAL G-42 & T-42
1 Acct 380 Gas Services	CUST380	228,746,364	166,042,757	24,984,666	0	17,876,084	6,169,869	4,778,556
2 Acct 381 Gas Meters	CUST381	24,915,976	15,188,303	2,339,184	0	2,023,106	2,385,861	700,742
3 Acct 382 Meter Installations	CUST382	45,198,411	27,552,090	4,243,357	0	3,669,983	4,328,031	1,271,169
4 Acct 383 Gas Regulators	CUST383	13,612,047	8,297,644	1,277,938	0	1,105,260	1,303,439	382,828
5 Customer Deposits	CUSTDEP	2,065,320	26,212	151	0	747,953	611,185	143,020
6 Transportation Customers	CUSTTR	38,807	439	59	0	9,286	12,352	4,096
7 Acct 386.0 Gas Water Heaters	CUST3860	100,000%	52,9058%	1,0143%	0.0004%	6,0245%	12,2512%	9,5864%
8 Acct 386.2 Cascade Diamond Boilers	CUST3862	100,000%	52,9058%	1,0143%	0.0004%	6,0245%	12,2512%	9,5864%
9 Acct 386.3 Conversion Burners	CUST3863	100,000%	52,9058%	1,0143%	0.0004%	6,0245%	12,2512%	9,5864%
10 Acct 487-Return Check Charges	CUST487	27,736	20,434	1,226	0	2,093	1,971	653
11 Acct 488-Rental Rev-W/H & Conv Burn	CUST488	100,000%	52,9058%	1,0143%	0.0004%	6,0245%	12,2512%	9,5864%
12 Acct 882-Revenue Guardian Care & C/S	CUST882	100,000%	52,9058%	1,0143%	0.0004%	6,0245%	12,2512%	9,5864%
13 Acct 902 Meter Reading Expense	CUST902	283,675	220,467	33,089	0	17,023	4,714	1,240
14 Acct 903-Cust Records & Collection Exp	CUST903	281,020	222,208	31,413	0	16,684	4,683	619
15 Acct 912-Demonstrating & Selling Exp	CUST912	100,000%	64,3422%	6,5521%	0.0000%	5,5093%	6,3206%	4,5820%
16 Acct 913-Advertising Expense	CUST913	100,000%	64,3422%	6,5521%	0.0000%	5,5093%	6,3206%	4,5820%
17 Acct 879-Customer Installations Exp	CUST879	100,000%	52,9058%	1,0143%	0.0004%	6,0245%	12,2512%	9,5864%
18 Acct 903 Collections Expense	CUST903C	11,447,296	8,185,483	1,185,903	3	1,117,566	384,625	103,390
19 Number of Meters		282,127	220,467	33,089	0	16,910	4,443	1,015
20 Average Number of Bills		281,032	222,208	31,413	12	16,684	4,683	619
21 Average Number of Customers		279,901	219,642	33,050	12	16,541	4,664	617
22								
23 TOTAL ANNUAL BILL COUNTS		3,372,382	2,666,494	376,961	144	200,206	56,195	7,432
24 Bi-Monthly Sales Bills		23,554	0	23,554	0	0	0	0
25 Sales Bills		3,309,471	2,665,888	353,282	144	190,733	43,802	3,331
26 Farm Sales Bills		484	166	66	0	170	24	0
27 Transportation Bills		36,729	428	59	0	9,141	11,985	3,777
28 Farm Transportation Bills		80	12	0	0	12	23	24
29 Daily Metered Transportation Bills		2,064	0	0	0	150	361	300
30								
31 TOTAL ANNUAL CUSTOMER COUNTS		3,358,808	2,635,699	396,597	143	198,495	55,963	7,406
32 Bi-Monthly Sales Customers		47,645	0	47,645	0	0	0	0
33 Sales Customers		3,271,874	2,635,095	348,828	143	189,039	43,587	3,310
34 Farm Sales Customers		482	165	65	0	170	24	0
35 Transportation Customers		36,667	427	59	0	9,124	11,968	3,772
36 Farm Transportation Customers		80	12	0	0	12	23	24
37 Daily Metered Transportation Customers		2,060	0	0	0	150	361	300

Bay State Gas Company
D.T.E. 05-27
Attachment AG-22-44(1)
Page 238 of 322

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

30-Jun-05 11:19 AM

PRODUCTION COMPONENTS

ALLOCATION FACTOR TABLE CONT-26

		HIGH WINTER LRG HI ANNUAL G-43 & T-43	LOW WINTER LOW ANNUAL G-50 & T-50	LOW WINTER MED ANNUAL G-51 & T-51	LOW WINTER HIGH ANNUAL G-52 & T-52	LOW WINTER LRG HI ANNUAL G-53 & T-53
CUSTOMER RELATED						
1	Acct 380 Gas Services	203,287	3,565,851	2,310,269	1,922,133	892,892
2	Acct 381 Gas Meters	49,813	647,509	1,022,284	382,655	176,519
3	Acct 382 Meter Installations	90,363	1,174,602	1,854,457	694,148	320,211
4	Acct 383 Gas Regulators	27,214	353,746	558,492	209,051	96,435
5	Customer Deposits	79,450	1,40,898	246,296	70,155	0
6	Transportation Customers	120	4,054	5,806	1,889	706
7	Acct 386.0 Gas Water Heaters	2,008%	0,8514%	3,4292%	3,9918%	7,9364%
8	Acct 386.2 Cascade Diamond Boilers	2,008%	0,8514%	3,4292%	3,9918%	7,9364%
9	Acct 386.3 Conversion Burners	2,008%	0,8514%	3,4292%	3,9918%	7,9364%
10	Acct 487-Return Check Charges	111	382	562	211	93
11	Acct 488-Rental Rev-W/H & Conv Burn	2,008%	0,8514%	3,4292%	3,9918%	7,9364%
12	Acct 882-Revenue Guardian Care & C/S	2,008%	0,8514%	3,4292%	3,9918%	7,9364%
13	Acct 902 Meter Reading Expense	153	3,563	2,143	663	622
14	Acct 903-Cust Records & Collection Exp	15	3,326	1,756	249	67
15	Acct 912-Demonstrating & Selling Exp	0,9620%	1,1208%	2,4771%	2,6285%	5,5055%
16	Acct 913-Advertising Expense	0,9620%	1,1208%	2,4771%	2,6285%	5,5055%
17	Acct 879-Customer Installations Exp	2,008%	0,8514%	3,4292%	3,9918%	7,9364%
18	Acct 903 Collections Expense	14,220	220,619	136,388	42,482	56,618
19	Number of Meters	63	3,546	2,076	427	91
20	Average Number of Bills	15	3,326	1,756	249	67
21	Average Number of Customers	15	3,300	1,746	248	66
22						
23	TOTAL ANNUAL BILL COUNTS	181	39,908	21,073	2,989	799
24	Bi-Monthly Sales Bills	0	0	0	0	0
25	Sales Bills	61	35,789	15,250	1,100	91
26	Farm Sales Bills	0	58	0	0	0
27	Transportation Bills	0	4,039	5,734	1,566	0
28	Farm Transportation Bills	0	0	0	9	0
29	Daily Metered Transportation Bills	120	22	89	314	708
30						
31	TOTAL ANNUAL CUSTOMER COUNTS	181	39,595	20,955	2,979	795
32	Bi-Monthly Sales Customers	0	0	0	0	0
33	Sales Customers	61	35,483	15,149	1,090	89
34	Farm Sales Customers	0	58	0	0	0
35	Transportation Customers	0	4,032	5,719	1,566	0
36	Farm Transportation Customers	0	0	0	9	0
37	Daily Metered Transportation Customers	120	22	87	314	706

Bay State Gas Company
D.T.E. 05-27
Attachment AG-22-44(1)
Page 239 of 322

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

30-Jun-05 11:19 AM

PRODUCTION COMPONENTS

ALLOCATION FACTOR TABLE CONT-27

INTERNALLY DEVELOPED

UNCOLLECTIBLE ACCOUNTS

1	Residential Heating Rate R-3 & R-4	C904R3	331,383,347	231,105,846	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
---	------------------------------------	--------	-------------	-------------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

30-Jun-05 11:19 AM

PRODUCTION COMPONENTS

ALLOCATION FACTOR TABLE CONT-27

		ALLOC	HIGH WINTER LRG HI ANNUAL G-43 & T-43	LOW WINTER LOW ANNUAL G-50 & T-50	LOW WINTER MED ANNUAL G-51 & T-51	LOW WINTER HIGH ANNUAL G-52 & T-52	LOW WINTER LRG HI ANNUAL G-53 & T-53
INTERNALLY DEVELOPED							
UNCOLLECTIBLE ACCOUNTS							
1	Residential Heating Rate R-3 & R-4	C904R3	0	0	0	0	0
2	Residential Non-Heating Rate R-1 & R-2	C904R1	0	0	0	0	0
3	Outdoor Lighting	C904OL	0	0	0	0	0
4	High Winter Low Annual Rate G40 & T40	C904R40	0	0	0	0	0
5	High Winter Med Annual Rate G41 & T41	C904R41	0	0	0	0	0
6	High Winter High Annual Rate G42 & T42	C904R42	0	0	0	0	0
7	High Wint Large Annual Rate G43 & T43	C904R43	3,990,054	0	0	0	0
8	Low Winter Low Annual Rate G50 & T50	C904R50	0	4,012,321	0	0	0
9	Low Winter Med Annual Rate G51 & T51	C904T51	0	0	12,089,570	0	0
10	Low Winter High Annual Rate G52 & T52	C904R52	0	0	0	5,838,327	0
11	Low Wint Large Annual Rate G53 & T53	C904R53	0	0	0	0	2,808,694
12							
13	LATE PAYMENT CHARGES						
14							
15	High Winter Low Annual Rate G40 & T40	C487R40	0	0	0	0	0
16	High Winter Med Annual Rate G41 & T41	C487R41	0	0	0	0	0
17	High Winter High Annual Rate G42 & T42	C487R42	0	0	0	0	0
18	High Wint Large Annual Rate G43 & T43	C487R43	3,990,054	0	0	0	0
19	Low Winter Low Annual Rate G50 & T50	C487R50	0	4,012,321	0	0	0
20	Low Winter Med Annual Rate G51 & T51	C487T51	0	0	12,089,570	0	0
21	Low Winter High Annual Rate G52 & T52	C487R52	0	0	0	5,838,327	0
22	Low Wint Large Annual Rate G53 & T53	C487R53	0	0	0	0	2,808,694
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							

Bay State Gas Company
D.T.E. 05-27
Attachment AG-22-44(1)
Page 241 of 322

30-Jun-05 11:19 AM

PRODUCTION COMPONENTS

ALLOCATION FACTOR TABLE CONT-27		ALLOC	TOTAL COMPANY INPUT
INTERNALLY DEVELOPED			
UNCOLLECTIBLE ACCOUNTS			
1	Residential Heating Rate R-3 & R-4	C904R3	Page 23 , Line 10, Col 2
2	Residential Non-Heating Rate R-1 & R-2	C904R1	Page 23 , Line 10, Col 3
3	Outdoor Lighting	C904OL	Page 23 , Line 10, Col 4
4	High Winter Low Annual Rate G40 & T40	C904R40	Page 23 , Line 10, Col 5
5	High Winter Med Annual Rate G41 & T41	C904R41	Page 23 , Line 10, Col 6
6	High Winter High Annual Rate G42 & T42	C904R42	Page 23 , Line 10, Col 7
7	High Wint Large Annual Rate G43 & T43	C904R43	Page 23 , Line 10, Col 8
8	Low Winter Low Annual Rate G50 & T50	C904R50	Page 23 , Line 10, Col 9
9	Low Winter Med Annual Rate G51 & T51	C904T51	Page 23 , Line 10, Col 10
10	Low Winter High Annual Rate G52 & T52	C904R52	Page 23 , Line 10, Col 11
11	Low Wint Large Annual Rate G53 & T53	C904R53	Page 23 , Line 10, Col 12
12			
13	LATE PAYMENT CHARGES		
14			
15	High Winter Low Annual Rate G40 & T40	C487R40	Page 23 , Line 10, Col 5
16	High Winter Med Annual Rate G41 & T41	C487R41	Page 23 , Line 10, Col 6
17	High Winter High Annual Rate G42 & T42	C487R42	Page 23 , Line 10, Col 7
18	High Wint Large Annual Rate G43 & T43	C487R43	Page 23 , Line 10, Col 8
19	Low Winter Low Annual Rate G50 & T50	C487R50	Page 23 , Line 10, Col 9
20	Low Winter Med Annual Rate G51 & T51	C487T51	Page 23 , Line 10, Col 10
21	Low Winter High Annual Rate G52 & T52	C487R52	Page 23 , Line 10, Col 11
22	Low Wint Large Annual Rate G53 & T53	C487R53	Page 23 , Line 10, Col 12
23			
24			
25			
26			
27			
28			
29			
30			
31			
32			
33			

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

30-Jun-05 11:19 AM

PRODUCTION COMPONENTS

INTERNALLY DEVELOPED-28

	ALLOC	TOTAL COMPANY	RESIDENTIAL HEATING R-3 & R-4	RESIDENTIAL NON-HEATING R-1 & R-2	OUTDOOR LIGHTING	HIGH WINTER LOW ANNUAL G-40 & T-40	HIGH WINTER MED ANNUAL G-41 & T-41	HIGH WINTER HIGH ANNUAL G-42 & T-42
1 Total Gas Plant In Service	PLANT	754,551,098	13,396,095	105,241	0	1,637,432	2,428,732	953,443
2 Sum of Allocated Labor Expense	LABOR	28,074,804	753,474	8,703	0	91,206	129,983	50,762
3 Acct 301 Organization	PLT301	689,189	12,236	96	0	1,496	2,218	871
4 Acct 303 Misc. Intangible Plant	PLT303	34,573,711	927,892	10,718	0	112,319	160,072	62,512
5 Acct 305 Structures & Improvements	PLT305	2,368,951	1,178,404	8,599	0	144,250	215,214	84,549
6 Acct 311 L.P. Gas Equipment	PLT311	4,339,415	2,158,585	15,751	0	264,235	394,227	154,876
7 Acct 320 Other Equipment	PLT320	819,245	407,523	2,974	0	49,885	74,427	29,239
8 Acct 321 L.N.G. Equipment	PLT321	15,428,067	7,674,491	56,000	0	939,445	1,401,608	550,636
9 Acct 365 Right of Way	PLT365	79,051	0	0	0	0	0	0
10 Acct 366 Structures & Improvements	PLT366	2,108,612	0	0	0	0	0	0
11 Acct 367 Gas Mains	PLT367	309,786,822	0	0	0	0	0	0
12 Acct 368 Compressor Station Equipment	PLT368	327,265	0	0	0	0	0	0
13 Acct 369 Meas. & Reg. Station Equip	PLT369	12,355,156	0	0	0	0	0	0
14 Acct 380 Gas Services	PLT380	228,746,364	0	0	0	0	0	0
15 Acct 381 Gas Meters	PLT381	24,915,974	0	0	0	0	0	0
16 Acct 382 Meter Installations	PLT382	45,198,411	0	0	0	0	0	0
17 Acct 383 Gas Regulators	PLT383	13,612,047	0	0	0	0	0	0
18 Acct 386 Gas Water Heaters	PLT386	14,053,382	0	0	0	0	0	0
19 Acct 386 Cascade Diamond Boilers	PLT3862	569,752	0	0	0	0	0	0
20 Acct 386 Conversion Burners	PLT3863	7,835,153	0	0	0	0	0	0
21 Acct 387 Other Equipment	PLT387	1,719,559	0	0	0	0	0	0
22 Acct 379 Other Equipment	PLT379	510,252	0	0	0	0	0	0
23 Acct 390 Structures & Improvements	PLT390	7,303,824	196,021	2,264	0	23,728	33,816	13,206
24 Acct 391 Office Equipment	PLT391	11,420,359	306,501	3,540	0	37,101	52,875	20,649
25 Acct 392 Transportation Equipment	PLT392	2,363,594	63,434	733	0	7,679	10,943	4,274
26 Acct 393 Stores Equipment	PLT393	50,473	1,355	16	0	164	234	91
27 Acct 394 Tools, Shop & Garage Equip	PLT394	1,847,938	49,595	573	0	6,003	8,556	3,341
28 Acct 396 Power Operated Equipment	PLT396	406,425	10,908	126	0	1,320	1,882	735
29 Acct 397 Communication Equip-Other	PLT397O	7,400,316	198,610	2,294	0	24,041	34,263	13,380
30 Acct 398 Miscellaneous Equipment	PLT398	25,220	677	8	0	82	117	46
31 LPG Gas Prod Labor Accts 717 to 735	LABPO	137,472	68,383	499	0	8,371	12,489	4,906
32 Acct 717-LPG Gas Expenses	EXP717	476	237	2	0	29	43	17
33 Acct 719-Handling Expense	EXP719	20,028	9,963	73	0	1,220	1,820	715
34 Acct 735-Miscellaneous Production Exp	EXP735	213,302	106,104	774	0	12,988	19,378	7,613
35 LPG Gas Prod Labor Accts 741 to 742	LABPM	47,828	23,791	174	0	2,912	4,345	1,707
36 Acct 741-Maintenance of Struct & Improv	EXP741	12,023	5,981	44	0	732	1,092	429
37 Acct 742-Maintenance of Production Eq	EXP742	107,427	53,438	390	0	6,541	9,759	3,834
38 LNG Gas Prod Labor Accts 754 to 777	LABLO	541,175	269,201	1,964	0	32,953	49,165	19,315
39 Acct 754-Liquefaction Expense	EXP754	165,884	82,517	602	0	10,101	15,070	5,920
40 Acct 757-Vaporization Expense	EXP757	29,356	14,603	107	0	1,788	2,667	1,045

Bay State Gas Company
D.T.E. 05-27
Attachment AG-22-44(1)
Page 243 of 322

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

30-Jun-05 11:19 AM

PRODUCTION COMPONENTS

INTERNALLY DEVELOPED-28

	ALLOC	HIGH WINTER LRG HI ANNUAL G-43 & T-43	LOW WINTER LOW ANNUAL G-50 & T-50	LOW WINTER MED ANNUAL G-51 & T-51	LOW WINTER HIGH ANNUAL G-52 & T-52	LOW WINTER LRG HI ANNUAL G-53 & T-53
1 Total Gas Plant In Service	PLANT	223,892	82,382	227,744	66,913	84,642
2 Sum of Allocated Labor Expense	LABOR	11,906	5,248	12,703	3,697	4,551
3 Acct 301 Organization	PLT301	204	75	208	61	77
4 Acct 303 Misc. Intangible Plant	PLT303	14,662	6,462	15,643	4,553	5,605
5 Acct 305 Structures & Improvements	PLT305	19,858	7,101	20,059	5,902	7,495
6 Acct 311 L.P. Gas Equipment	PLT311	36,375	13,008	36,744	10,811	13,730
7 Acct 320 Other Equipment	PLT320	6,867	2,456	6,937	2,041	2,592
8 Acct 321 L.N.G. Equipment	PLT321	129,325	46,249	130,637	38,437	48,814
9 Acct 365 Right of Way	PLT365	0	0	0	0	0
10 Acct 366 Structures & Improvements	PLT366	0	0	0	0	0
11 Acct 367 Gas Mains	PLT367	0	0	0	0	0
12 Acct 368 Compressor Station Equipment	PLT368	0	0	0	0	0
13 Acct 369 Meas. & Reg. Station Equip	PLT369	0	0	0	0	0
14 Acct 380 Gas Services	PLT380	0	0	0	0	0
15 Acct 381 Gas Meters	PLT381	0	0	0	0	0
16 Acct 382 Meter Installations	PLT382	0	0	0	0	0
17 Acct 383 Gas Regulators	PLT383	0	0	0	0	0
18 Acct 386 Gas Water Heaters	PLT386	0	0	0	0	0
19 Acct 386 Cascade Diamond Boilers	PLT3862	0	0	0	0	0
20 Acct 386 Conversion Burners	PLT3863	0	0	0	0	0
21 Acct 387 Other Equipment	PLT387	0	0	0	0	0
22 Acct 379 Other Equipment	PLT379	0	0	0	0	0
23 Acct 390 Structures & Improvements	PLT390	3,097	1,365	3,305	962	1,184
24 Acct 391 Office Equipment	PLT391	4,843	2,135	5,167	1,504	1,851
25 Acct 392 Transportation Equipment	PLT392	1,002	442	1,069	311	383
26 Acct 393 Stores Equipment	PLT393	21	9	23	7	8
27 Acct 394 Tools, Shop & Garage Equip	PLT394	784	345	836	243	300
28 Acct 396 Power Operated Equipment	PLT396	172	76	184	54	66
29 Acct 397 Communication Equip-Other	PLT397O	3,138	1,383	3,348	974	1,200
30 Acct 398 Miscellaneous Equipment	PLT398	11	5	11	3	4
31 LPG Gas Prod Labor Accts 717 to 735	LABPO	1,152	412	1,164	342	435
32 Acct 717-LPG Gas Expenses	EXP717	4	1	4	1	2
33 Acct 719-Handling Expense	EXP719	168	60	170	50	63
34 Acct 735-Miscellaneous Production Exp	EXP735	1,788	639	1,806	531	675
35 LPG Gas Prod Labor Accts 741 to 742	LABPM	401	143	405	119	151
36 Acct 741-Maintenance of Struct & Improv	EXP741	101	36	102	30	38
37 Acct 742-Maintenance of Production Eq	EXP742	900	322	910	268	340
38 LNG Gas Prod Labor Accts 754 to 777	LABLO	4,536	1,622	4,582	1,348	1,712
39 Acct 754-Liquefaction Expense	EXP754	1,391	497	1,405	413	525
40 Acct 757-Vaporization Expense	EXP757	246	88	249	73	93

Bay State Gas Company
D.T.E. 05-27
Attachment AG-22-44(1)
Page 244 of 322

30-Jun-05 11:19 AM

PRODUCTION COMPONENTS

INTERNALLY DEVELOPED-28		ALLOC	TOTAL COMPANY INPUT
1	Total Gas Plant In Service	PLANT	Page 4, Line 18
2	Sum of Allocated Labor Expense	LABOR	Page 22, Line 21
3	Acct 301 Organization	PLT301	Page 2, Line 3
4	Acct 303 Misc. Intangible Plant	PLT303	Page 2, Line 4
5	Acct 305 Structures & Improvements	PLT305	Page 2, Line 13
6	Acct 311 L.P. Gas Equipment	PLT311	Page 2, Line 14
7	Acct 320 Other Equipment	PLT320	Page 2, Line 18
8	Acct 321 L.N.G. Equipment	PLT321	Page 2, Line 19
9	Acct 365 Right of Way	PLT365	Page 3, Line 2
10	Acct 366 Structures & Improvements	PLT366	Page 3, Line 3
11	Acct 367 Gas Mains	PLT367	Page 3, Line 11
12	Acct 368 Compressor Station Equipment	PLT368	Page 3, Line 12
13	Acct 369 Meas. & Reg. Station Equip	PLT369	Page 3, Line 13
14	Acct 380 Gas Services	PLT380	Page 3, Line 14
15	Acct 381 Gas Meters	PLT381	Page 3, Line 15
16	Acct 382 Meter Installations	PLT382	Page 3, Line 16
17	Acct 383 Gas Regulators	PLT383	Page 3, Line 17
18	Acct 386 Gas Water Heaters	PLT386	Page 3, Line 18
19	Acct 386 Cascade Diamond Boilers	PLT3862	Page 3, Line 19
20	Acct 386 Conversion Burners	PLT3863	Page 3, Line 20
21	Acct 387 Other Equipment	PLT387	Page 3, Line 22
22	Acct 379 Other Equipment	PLT379	Page 3, Line 24
23	Acct 390 Structures & Improvements	PLT390	Page 4, Line 2
24	Acct 391 Office Equipment	PLT391	Page 4, Line 6
25	Acct 392 Transportation Equipment	PLT392	Page 4, Line 7
26	Acct 393 Stores Equipment	PLT393	Page 4, Line 8
27	Acct 394 Tools, Shop & Garage Equip	PLT394	Page 4, Line 9
28	Acct 396 Power Operated Equipment	PLT396	Page 4, Line 10
29	Acct 397 Communication Equip-Other	PLT397O	Page 4, Line 11 & 12
30	Acct 398 Miscellaneous Equipment	PLT398	Page 4, Line 16
31	LPG Gas Prod Labor Accts 717 to 735	LABPO	Pg 19, Ln 2 to 4
32	Acct 717-LPG Gas Expenses	EXP717	Page 9, Line 2
33	Acct 719-Handling Expense	EXP719	Page 9, Line 3
34	Acct 735-Miscellaneous Production Exp	EXP735	Page 9, Line 6
35	LPG Gas Prod Labor Accts 741 to 742	LABPM	Pg 19, Ln 9 to 10
36	Acct 741-Maintenance of Struct & Improv	EXP741	Page 9, Line 9
37	Acct 742-Maintenance of Production Eq	EXP742	Page 9, Line 10
38	LNG Gas Prod Labor Accts 754 to 777	LABLO	Pg 19, Ln 14 to 18
39	Acct 754-Liquefaction Expense	EXP754	Page 9, Line 14
40	Acct 757-Vaporization Expense	EXP757	Page 9, Line 15

PRODUCTION COMPONENTS

INTERNALLY DEVELOPED CONT-29

	ALLOC	TOTAL COMPANY	RESIDENTIAL HEATING R-3 & R-4	RESIDENTIAL NON-HEATING R-1 & R-2	OUTDOOR LIGHTING	HIGH WINTER LOW ANNUAL G-40 & T-40	HIGH WINTER MED ANNUAL G-41 & T-41	HIGH WINTER HIGH ANNUAL G-42 & T-42
1 Acct 759-Handling Expense	EXP759	26,304	13,085	95	0	1,602	2,390	939
2 Acct 775-Miscellaneous Production Exp	EXP775	644,763	320,729	2,340	0	39,261	58,575	23,012
3 Acct 777-Lease Expense	EXP777	914,499	454,905	3,319	0	55,686	83,080	32,639
4 LNG Gas Prod Labor Accts 781 to 782	LABLM	110,159	54,797	400	0	6,708	10,008	3,932
5 Acct 781-Maintenance of Struct & Improv	EXP781	11,060	5,502	40	0	673	1,005	395
6 Acct 782-Maintenance of Production Eq	EXP782	262,396	130,525	952	0	15,978	23,838	9,365
7 Total Intangible Plant	INTPLT	35,262,900	940,128	10,814	0	113,815	162,291	63,383
8 Total Production Plant	PRODP1T	23,368,270	11,624,242	84,821	0	1,422,939	2,122,959	834,026
9 Trans & Distr Op Labor Accts 851 to 881	LABDO	10,090,604	0	0	0	0	0	0
10 Acct 851-Sys Control & Load Dispatch	EXP851	0	0	0	0	0	0	0
11 Acct 852-Communication System Exp	EXP852	143,882	0	0	0	0	0	0
12 Acct 857-Measuring & Regul Stat Exp	EXP857	405,485	0	0	0	0	0	0
13 Acct 874-Mains and Services Exp	EXP874	3,764,532	0	0	0	0	0	0
14 Acct 878-Meter & House Regulator Exp	EXP878	5,633,560	0	0	0	0	0	0
15 Acct 879-Customer Installations Exp	EXP879	5,923,626	0	0	0	0	0	0
16 Acct 880-Other Expenses	EXP880	580,567	0	0	0	0	0	0
17 Acct 881-Rents	EXP881	61,576	0	0	0	0	0	0
18 Trans & Distr Maint Lab Accts 851 to 881	LABDM	4,225,605	0	0	0	0	0	0
19 Acct 886-Maintenance of Struct & Improv	EXP886	41,025	0	0	0	0	0	0
20 Acct 887-Maintenance of Mains	EXP887	3,789,693	0	0	0	0	0	0
21 Acct 888-Maint of Compressor Station Eq	EXP888	0	0	0	0	0	0	0
22 Acct 889-Maint of Meas & Reg Station Eq	EXP889	229,637	0	0	0	0	0	0
23 Acct 892-Maintenance of Services	EXP892	1,687,229	0	0	0	0	0	0
24 Acct 893-Mnt of Meters and House Regul	EXP893	436,322	0	0	0	0	0	0
25 Acct 894-Maintenance of Other Equip	EXP894	403,627	0	0	0	0	0	0
26 Customer Accts Labor Accts 902 to 903	LABCA	5,617,451	0	0	0	0	0	0
27 Acct 902-Meter Reading Expenses	EXP902	695,743	0	0	0	0	0	0
28 Acct 903-Cust Records & Collection Exp	EXP903	7,500,932	0	0	0	0	0	0
29 Sales Expenses Labor Accts 912 to 916	LABSA	125,024	0	0	0	0	0	0
30 Acct 912-Demonstrating & Selling Exp	EXP912	159,642	0	0	0	0	0	0
31 Acct 913-Advertising Exp	EXP913	198,371	0	0	0	0	0	0
32 Acct 916-Miscellaneous Sales Exp	EXP916	7,065	0	0	0	0	0	0
33 Acct 920-Administrative & General Sal	EXP920	1,745,741	112,160	5,516	0	12,224	9,307	3,211
34 Acct 921-Office Supplies & Expenses	EXP921	3,909,418	251,171	12,353	0	27,373	20,841	7,192
35 Acct 922-Administrative Exp Transf-Cr	EXP922	(3,814,124)	(245,049)	(12,052)	(0)	(26,706)	(20,333)	(7,016)
36 Acct 923-Outside Services Employed	EXP923	24,687,388	2,041,907	73,883	12	215,653	255,636	104,247
37 Acct 924-Property Insurance	EXP924	0	0	0	0	0	0	0
38 Acct 925-Injuries & Damages	EXP925	2,903,441	186,539	9,174	0	20,330	15,478	5,341
39 Acct 926-Employees Pensions & Benef	EXP926	14,803,575	262,399	3,031	0	31,763	45,267	17,678
40 Acct 928-Regulatory Commission Exp	EXP928	690,943	44,391	2,183	0	4,838	3,683	1,277

Bay State Gas Company
D.T.E. 05-27
Attachment AG-22-44(1)
Page 246 of 322

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

11:19 AM

30-Jun-05

PRODUCTION COMPONENTS

INTERNALLY DEVELOPED CONT-29

ALOC	HIGH WINTER LRG HI ANNUAL G-43 & T-43	LOW WINTER LOW ANNUAL G-50 & T-50	LOW WINTER MED ANNUAL G-51 & T-51	LOW WINTER HIGH ANNUAL G-52 & T-52	LOW WINTER LRG HI ANNUAL G-53 & T-53
EXP759	220	79	223	66	83
EXP775	5,405	1,933	5,460	1,606	2,040
EXP777	7,666	2,741	7,743	2,278	2,893
LABLM	923	330	933	274	349
EXP781	93	33	94	28	35
EXP782	2,200	787	2,222	654	830
INTPLT	14,867	6,538	15,851	4,614	5,682
PRODPLT	195,883	70,052	197,870	58,218	73,936
LABDO	0	0	0	0	0
EXP851	0	0	0	0	0
EXP852	0	0	0	0	0
EXP857	0	0	0	0	0
EXP874	0	0	0	0	0
EXP878	0	0	0	0	0
EXP879	0	0	0	0	0
EXP880	0	0	0	0	0
EXP881	0	0	0	0	0
LABDM	0	0	0	0	0
EXP886	0	0	0	0	0
EXP887	0	0	0	0	0
EXP888	0	0	0	0	0
EXP889	0	0	0	0	0
EXP892	0	0	0	0	0
EXP893	0	0	0	0	0
EXP894	0	0	0	0	0
LABCA	0	0	0	0	0
EXP902	0	0	0	0	0
EXP903	0	0	0	0	0
LABSA	0	0	0	0	0
EXP912	0	0	0	0	0
EXP913	0	0	0	0	0
EXP916	0	0	0	0	0
EXP920	731	1,712	1,729	449	360
EXP921	1,637	3,834	3,871	1,005	806
EXP922	(1,597)	(3,740)	(3,777)	(981)	(786)
EXP923	25,641	33,918	72,647	31,453	16,384
EXP924	0	0	0	0	0
EXP925	1,215	2,847	2,875	746	598
EXP926	4,146	1,827	4,424	1,287	1,585
EXP928	289	678	684	178	142

Bay State Gas Company
D.T.E. 05-27
Attachment AG-22-44(1)
Page 247 of 322

30-Jun-05

11:19 AM

PRODUCTION COMPONENTS

PRODUCTION COMPONENTS		ALLOC	TOTAL COMPANY INPUT
INTERNALLY DEVELOPED CONT-29			
1	Acct 759-Handling Expense	EXP759	Page 9, Line 17
2	Acct 775-Miscellaneous Production Exp	EXP775	Page 9, Line 20
3	Acct 777-Lease Expense	EXP777	Page 9, Line 21
4	LNG Gas Prod Labor Accts 781 to 782	LABLM	Pg 19, Ln 21 to 22
5	Acct 781-Maintenance of Struct & Improv	EXP781	Page 9, Line 24
6	Acct 782-Maintenance of Production Eq	EXP782	Page 9, Line 25
7	Total Intangible Plant	INTPLT	Page 2, Line 5
8	Total Production Plant	PRODPLT	Page 2, Line 20
9	Trans & Distr Op Labor Accts 851 to 881	LABDO	Pg 20, Ln 2 to 9
10	Acct 851-Sys Control & Load Dispatch	EXP851	Page 11, Line 2
11	Acct 852-Communication System Exp	EXP852	Page 11, Line 3
12	Acct 857-Measuring & Regul Stat Exp	EXP857	Page 11, Line 4
13	Acct 874-Mains and Services Exp	EXP874	Page 11, Line 5
14	Acct 878-Meter & House Regulator Exp	EXP878	Page 11, Line 6
15	Acct 879-Customer Installations Exp	EXP879	Page 11, Line 7
16	Acct 880-Other Expenses	EXP880	Page 11, Line 8
17	Acct 881-Rents	EXP881	Page 11, Line 9
18	Trans & Distr Maint Lab Accts 851 to 881	LABDM	Pg 20, Ln 12 to 18
19	Acct 886-Maintenance of Struct & Improv	EXP886	Page 11, Line 12
20	Acct 887-Maintenance of Mains	EXP887	Page 11, Line 13
21	Acct 888-Maint of Compressor Station Eq	EXP888	Page 11, Line 14
22	Acct 889-Maint of Meas & Reg Station Eq	EXP889	Page 11, Line 15
23	Acct 892-Maintenance of Services	EXP892	Page 11, Line 16
24	Acct 893-Mnt of Meters and House Regul	EXP893	Page 11, Line 17
25	Acct 894-Maintenance of Other Equip	EXP894	Page 11, Line 18
26	Customer Accts Labor Accts 902 to 903	LABCA	Pg 21, Ln 2 to 3
27	Acct 902-Meter Reading Expenses	EXP902	Page 12, Line 2
28	Acct 903-Cust Records & Collection Exp	EXP903	Page 12, Line 8
29	Sales Expenses Labor Accts 912 to 916	LABSA	Pg 21, Ln 6 to 8
30	Acct 912-Demonstrating & Selling Exp	EXP912	Page 12, Line 28
31	Acct 913-Advertising Exp	EXP913	Page 12, Line 32
32	Acct 916-Miscellaneous Sales Exp	EXP916	Page 12, Line 33
33	Acct 920-Administrative & General Sal	EXP920	Page 13, Line 1
34	Acct 921-Office Supplies & Expenses	EXP921	Page 13, Line 4
35	Acct 922-Administrative Exp Transf-Cr	EXP922	Page 13, Line 5
36	Acct 923-Outside Services Employed	EXP923	Page 13, Line 38
37	Acct 924-Property Insurance	EXP924	Page 13, Line 39
38	Acct 925-Injuries & Damages	EXP925	Page 13, Line 43
39	Acct 926-Employees Pensions & Benef	EXP926	Page 14, Line 4
40	Acct 928-Regulatory Commission Exp	EXP928	Page 14, Line 7

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

30-Jun-05 11:19 AM

PRODUCTION COMPONENTS

INTERNALLY DEVELOPED CONT-30

	ALLOC	TOTAL COMPANY	RESIDENTIAL HEATING R-3 & R-4	RESIDENTIAL NON-HEATING R-1 & R-2	OUTDOOR LIGHTING	HIGH WINTER LOW ANNUAL G-40 & T-40	HIGH WINTER MED ANNUAL G-41 & T-41	HIGH WINTER HIGH ANNUAL G-42 & T-42
1 Acct 929-Duplicate Charges-Cr	EXP929	0	0	0	0	0	0	0
2 Acct 930-Miscellaneous General Exp	EXP930	863,406	55,472	2,728	0	6,046	4,603	1,588
3 Acct 931 Rentals	EXP931	3,496,560	70,840	3,484	0	7,720	5,878	2,028
4 Acct 932 Maintenance of General Plant	EXP932	846,177	20,771	240	0	2,514	3,583	1,399
5 Total LPG Gas Operating Labor	TLABPO	178,302	88,694	647	0	10,857	16,198	6,364
6 Total LPG Gas Maintenance Labor	TLABPM	57,587	28,646	209	0	3,507	5,232	2,055
7 Total LNG Gas Operating Labor	TLABLO	994,820	484,860	3,611	0	60,577	90,377	35,506
8 Total LNG Gas Maintenance Labor	TLABLM	116,542	57,973	423	0	7,096	10,588	4,159
9 Total Transm & Distr Operating Labor	TLABDO	10,606,968	0	0	0	0	0	0
10 Total Transm & Distr Maintenance Labor	TLABDM	4,229,868	0	0	0	0	0	0
11 Total Customer Accounts Labor	TLABCA	5,838,988	0	0	0	0	0	0
12 Total Sales Expense Labor	TLABSA	205,166	0	0	0	0	0	0
13 Total General Plant	GENPLT	33,883,089	831,725	9,607	0	100,678	143,482	56,034
14 Claimed Sales Revenues less Gas Costs	REVCLAIM	175,507,389	11,275,940	554,559	13	1,228,891	935,634	322,852
15 Sales Expense Accounts 912 to 913	EXP9123	358,013	0	0	0	0	0	0
16 Acct 367 Mains and Acct 380 Services	PLT36780	538,533,185	0	0	0	0	0	0
17 Acct 381, 382 & 383 - Meters & Hse Reg	PLT3813	83,726,431	0	0	0	0	0	0
18 Acct 380,381,382 & 383 - Serv,Met & Reg	PLT3803	312,472,794	0	0	0	0	0	0
19 Transm & Distr Oper Accts 851 to 879	EXP8519	15,871,085	0	0	0	0	0	0
20 Total Customer Deposits	TOTCDEP	3,090,784	0	0	0	0	0	0
21 Acct 386 Other Property on Cust's Prem	PLT386	22,458,288	0	0	0	0	0	0
22 Total Transmission & Distribution Plant	DISTRPLT	662,036,839	0	0	0	0	0	0
23 Acct 904-Uncollectible Accts-Gas Sales	EXP904S	8,489,829	4,300,975	333,285	0	563,471	175,700	20,768
24 Acct 904-Uncollectible Accts-Other Rev	EXP904O	412,767	0	0	0	0	0	0
25 Acct 367-Gas Mains - Bare Steel	PLT367BS	2,554,359	0	0	0	0	0	0
26 Acct 367-Gas Mains - Joint Clamping	PLT367JC	20,020,721	0	0	0	0	0	0
27 Acct 367-Gas Mains - Cast Iron	PLT367CI	5,690,941	0	0	0	0	0	0
28 Acct 367-Gas Mains - Cathodic Protect	PLT367CP	8,274,626	0	0	0	0	0	0
29 Acct 367-Gas Mains - Coated Steel	PLT367CS	146,116,729	0	0	0	0	0	0
30 Acct 367-Gas Mains - Plastic	PLT367P	126,075,826	0	0	0	0	0	0
31 Acct 391-Office Equipment	PLT391OE	5,917,985	158,827	1,835	0	19,226	27,400	10,700
32 Acct 391-Office IT Equipment	PLT391IT	5,502,374	147,673	1,706	0	17,875	25,475	9,949
33 Acct 397-Comm Equip MetScan	PLT397M	644,449	0	0	0	0	0	0
34 Acct 397-Comm Equip ERT/ITRON	PLT397E	2,248,171	0	0	0	0	0	0
35 Acct 304 Lnd Rghts-LNG & LPG Dir Csts	PLT304L	367,132	182,625	1,333	0	22,355	33,353	13,103
36 Acct 305 St & Impr-LNG & LPG Dir Csts	PLT305L	1,768,764	879,849	6,420	0	107,703	160,689	63,128
37 Acct 320 Other Eq-LNG & LPG Dir Csts	PLT320L	753,385	374,762	2,735	0	45,875	68,443	26,889
38 Total Gas Operation & Maintenance Labor	OMLAB	23,718,343	753,474	8,703	0	91,206	129,983	50,762
39 Inflation Adjustment Residual O&M	OTHOMINF	36,141,958	1,289,560	12,480	0	156,872	228,209	89,364

Bay State Gas Company
D.T.E. 05-27
Attachment AG-22-44(1)
Page 249 of 322

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

30-Jun-05 11:19 AM

PRODUCTION COMPONENTS

INTERNALLY DEVELOPED CONT-30

ALOC	HIGH WINTER LRG HI ANNUAL G-43 & T-43	LOW WINTER LOW ANNUAL G-50 & T-50	LOW WINTER MED ANNUAL G-51 & T-51	LOW WINTER HIGH ANNUAL G-52 & T-52	LOW WINTER LRG HI ANNUAL G-53 & T-53
EXP929	0	0	0	0	0
EXP930	361	847	855	222	178
EXP931	462	1,081	1,092	283	227
EXP932	328	145	350	102	125
5 Total LPG Gas Operating Labor	1,495	534	1,510	444	564
6 Total LPG Gas Maintenance Labor	483	173	488	143	182
7 Total LNG Gas Operating Labor	8,339	2,982	8,424	2,478	3,148
8 Total LNG Gas Maintenance Labor	977	349	987	290	369
9 Total Transm & Distr Operating Labor	0	0	0	0	0
10 Total Transm & Distr Maintenance Labor	0	0	0	0	0
11 Total Customer Accounts Labor	0	0	0	0	0
12 Total Sales Expense Labor	0	0	0	0	0
13 Total General Plant	13,143	5,793	14,022	4,081	5,024
14 Claimed Sales Revenues less Gas Costs	73,470	172,108	173,777	45,118	36,166
15 Sales Expense Accounts 912 to 913	0	0	0	0	0
16 Acct 367 Mains and Acct 380 Services	0	0	0	0	0
17 Acct 381, 382 & 383 - Meters & Hse Reg	0	0	0	0	0
18 Acct 380,381,382 & 383 - Serv,Met & Reg	0	0	0	0	0
19 Transm & Distr Oper Accts 851 to 879	0	0	0	0	0
20 Total Customer Deposits	0	0	0	0	0
21 Acct 386 Other Property on Cust's Prem	0	0	0	0	0
22 Total Transmission & Distribution Plant	0	0	0	0	0
23 Acct 904-Uncollectible Accts-Gas Sales	568	106,806	66,521	7,932	1,114
24 Acct 904-Uncollectible Accts-Other Rev	0	0	0	0	0
25 Acct 367-Gas Mains - Bare Steel	0	0	0	0	0
26 Acct 367-Gas Mains - Joint Clamping	0	0	0	0	0
27 Acct 367-Gas Mains - Cast Iron	0	0	0	0	0
28 Acct 367-Gas Mains - Cathodic Protect	0	0	0	0	0
29 Acct 367-Gas Mains - Coated Steel	0	0	0	0	0
30 Acct 367-Gas Mains - Plastic	0	0	0	0	0
31 Acct 391-Office Equipment	2,510	1,106	2,678	779	959
32 Acct 391-Office IT Equipment	2,333	1,028	2,490	725	892
33 Acct 397-Comm Equip MetScan	0	0	0	0	0
34 Acct 397-Comm Equip ERT/ITRON	0	0	0	0	0
35 Acct 304 Lnd Rghts-LNG & LPG Dir Csts	3,077	1,101	3,109	915	1,162
36 Acct 305 St & Impr-LNG & LPG Dir Csts	14,827	5,302	14,977	4,407	5,596
37 Acct 320 Other Eq-LNG & LPG Dir Csts	6,315	2,258	6,379	1,877	2,384
38 Total Gas Operation & Maintenance Labor	11,906	5,248	12,703	3,697	4,551
39 Inflation Adjustment Residual O&M	20,973	8,448	21,833	6,385	7,971

30-Jun-05 11:19 AM

PRODUCTION COMPONENTS

INTERNALLY DEVELOPED CONT-30

	ALLOC	TOTAL COMPANY INPUT
1 Acct 929-Duplicate Charges-Cr	EXP929	Page 14, Line 8
2 Acct 930-Miscellaneous General Exp	EXP930	Page 14, Line 12
3 Acct 931 Rents	EXP931	Page 14, Line 18
4 Acct 932 Maintenance of General Plant	EXP932	Page 14, Line 22
5 Total LPG Gas Operating Labor	TLABPO	Page 19, Line 5
6 Tot LPG Gas Maintenance Labor	TLABPM	Page 19, Line 9
7 Total LNG Gas Operating Labor	TLABLO	Page 19, Line 17
8 Tot LNG Gas Maintenance Labor	TLABLM	Page 19, Line 21
9 Total Transm & Distr Operating Labor	TLABDO	Page 20, Line 10
10 Total Transm & Distr Maintenance Labor	TLABDM	Page 20, Line 19
11 Total Customer Accounts Labor	TLABCA	Page 21, Line 4
12 Total Sales Expense Labor	TLABSA	Page 21, Line 9
13 Total General Plant	GENPLT	Pg 4, Ln 3 & 17
14 Claimed Sales Revenues less Gas Costs	REVCLAIM	See Allocator Descriptions
15 Sales Expense Accounts 912 to 913	EXP9123	Pg 12, Ln 28 & 32
16 Acct 367 Mains and Acct 380 Services	PLT36780	Pg 3, Ln 11 & 14
17 Acct 381, 382 & 383 - Meters & Hse Reg	PLT3813	Pg 3, Line 15, 16 & 17
18 Acct 380,381,382 & 383 - Serv Met & Reg	PLT3803	Pg 3, Line 14, 15, 16 & 17
19 Transm & Distr Oper Accts 851 to 879	EXP8519	Pg 11, Line 2 to 7
20 Total Customer Deposits	TOTCDEP	Page 7, Line 23
21 Acct 386 Other Property on Cust's Prem	PLT386	Page 3, Line 21
22 Total Transmission & Distribution Plant	DISTRPLT	Page 3, Line 23 & 25
23 Acct 904-Uncollectible Accts-Gas Sales	EXP904S	Pg 12, Line 9 to 19
24 Acct 904-Uncollectible Accts-Other Rev	EXP904O	Page 12, Line 22 & 23
25 Acct 367-Gas Mains - Bare Steel	PLT367BS	Page 3, Line 4
26 Acct 367-Gas Mains - Joint Clamping	PLT367JC	Page 3, Line 5
27 Acct 367-Gas Mains - Cast Iron	PLT367CI	Page 3, Line 6
28 Acct 367-Gas Mains - Cathodic Protect	PLT367CP	Page 3, Line 7
29 Acct 367-Gas Mains - Coated Steel	PLT367CS	Page 3, Line 8
30 Acct 367-Gas Mains - Plastic	PLT367P	Page 3, Line 9
31 Acct 391-Office Equipment	PLT391OE	Page 4, Line 4
32 Acct 391-Office IT Equipment	PLT391IT	Page 4, Line 5
33 Acct 397-Comm Equip MetScan	PLT397M	Page 4, Line 13
34 Acct 397-Comm Equip ERT/ITRON	PLT397E	Page 4, Line 14
35 Acct 304 Lnd Rghts-LNG & LPG Dir Csts	PLT304L	Page 2, Line 6 & 7
36 Acct 305 St & Impr-LNG & LPG Dir Csts	PLT305L	Page 2, Line 10 & 11
37 Acct 320 Other Eq-LNG & LPG Dir Csts	PLT320L	Page 2, Line 15 & 16
38 Total Gas Operation & Maintenance Labor	OMLAB	Page 22, Line 15
39 Inflation Adjustment Residual O&M	OTHOMINF	See Allocator Descriptions

PRODUCTION COMPONENTS

INTERNALLY DEVELOPED CONT-31

[illegible]

PRODUCTION COMPONENTS								
INTERNALLY DEVELOPED CONT-31		ALLOC	HIGH WINTER LRG HI ANNUAL G-43 & T-43	LOW WINTER LOW ANNUAL G-50 & T-50	LOW WINTER MED ANNUAL G-51 & T-51	LOW WINTER HIGH ANNUAL G-52 & T-52	LOW WINTER LRG HI ANNUAL G-53 & T-53	
1	Total Gas Supply Expense	GASCOSTS	3,916,584	3,840,213	11,915,793	5,793,209	2,772,528	
2	Acct 903-Cust Records & Coll Subtotal	EXP903T	0	0	0	0	0	
3								
4								
5								
6								
7								
8								
9								
10								
11	<u>NiSource Service Charges Allocators</u>							
12	Basis 1 - 50% Gross Plant	BASIS1P	223,892	82,382	227,744	66,913	84,642	
13	Basis 1 - 50% O&M less Gas & NIS 923	BASIS1OM	34,279	153,517	122,385	20,978	14,417	
14	Basis 10 - Number of Annual Customers	BASIS10	181	39,595	20,955	2,979	795	
15	Basis 11 - Labor	BASIS11	11,906	5,248	12,703	3,697	4,551	
16	Basis 2 - Gross Plant	BASIS2	223,892	82,382	227,744	66,913	84,642	
17	Basis 20 - Total Direct Billed	BASIS20	1,627	3,591	3,698	964	788	
18	Basis 7 - 50% Deprec Plant	BASIS7P	205,494	74,575	208,321	61,248	77,626	
19	Basis 7 - 50% O&M less NIS 923	BASIS7OM	3,950,863	3,993,730	12,038,178	5,814,187	2,786,945	
20	Basis 9 - Labor	BASIS9	11,906	5,248	12,703	3,697	4,551	
21	Basis Co 12 - Oth NiSource Serv Chrgs	BASCO12	7,088	15,113	16,590	4,476	3,379	
22								
23								
24								
25								
26								
27								
28								
29								
30								
31								
32								
33								
34								
35								
36								
37								
38								
39								
40								

30-Jun-05 11:19 AM

PRODUCTION COMPONENTS

ALLOC TOTAL COMPANY INPUT

INTERNALLY DEVELOPED CONT-31

1 Total Gas Supply Expense Page 10 , Line 7
2 Acct 903-Cust Records & Coll Subtotal Pg 12 , Line 3 to 5
3
4
5
6
7
8
9

NiSource Service Charges Allocators

11 BASIS1P Page 4 , Line 18
12 Basis 1 - 50% Gross Plant See Allocator Descriptions
13 Basis 1 - 50% O&M less Gas & NIS 923 Page 26 , Line 31
14 Basis 10 - Number of Annual Customers Page 22 , Line 21
15 Basis 11 - Labor Page 4 , Line 18
16 Basis 2 - Gross Plant Page 13 , Line 28
17 Basis 20 - Total Direct Billed See Allocator Descriptions
18 Basis 7 - 50% Deprec Plant See Allocator Descriptions
19 Basis 7 - 50% O&M less NIS 923 Page 22 , Line 21
20 Basis 9 - Labor Page 13 , Ln 6 to 17 & 28
21 Basis Co 12 - Oth NiSource Serv Chrgs
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

11:19 AM

30-Jun-05

PRODUCTION COMPONENTS

INTERNALLY DEVELOPED CONT-32

	TOTAL COMPANY	RESIDENTIAL HEATING R-3 & R-4	RESIDENTIAL NON-HEATING R-1 & R-2	OUTDOOR LIGHTING	HIGH WINTER LOW ANNUAL G-40 & T-40	HIGH WINTER MED ANNUAL G-41 & T-41	HIGH WINTER HIGH ANNUAL G-42 & T-42
REVENUES FROM GAS SALES							
1 Revenues Firm Sales of Gas	478,651,282	323,429,755	10,830,018	2,726	31,946,429	46,870,369	22,321,850
2 Annual Base Revenues - Sales Actual	122,553,551	90,306,804	5,317,329	479	9,322,851	8,796,996	2,913,844
3 Annual Base Rev - Trans Actual	17,846,899	23,420	1,127	0	646,079	3,200,449	4,286,966
4 GAF Direct Revenues	307,478,651	211,649,336	5,037,827	2,066	20,118,078	31,776,012	13,793,415
5 Production & Storage Revenues	9,129,632	6,662,418	66,089	7	602,472	924,653	396,525
6 GAF Indirect Bad Debt Revenues	7,118,165	4,941,538	109,207	47	438,488	717,301	324,983
7 Weather Normaliztn Adj Base Rev-Sales	(2,307,187)	(1,714,352)	0	0	(253,911)	(82,199)	(127,701)
8 Weather Normaliztn Adj Base Rev-Trans	(248,396)	(504)	0	0	(19,193)	(94,414)	(127,701)
9 GAF Deferred Direct Gas Revenues	17,079,967	11,561,095	298,440	127	1,088,006	1,803,283	816,017
10 GAF Indirect Revenues	19,129,611	13,280,067	293,486	125	1,178,409	1,927,700	873,371

REVENUE REQUIREMENT INPUTS

1 Claimed Rate of Return	9.050%	9.050%	9.050%	9.050%	9.050%	9.050%	9.050%
2 Annual Booked Therm Sales	365,949,048	247,703,740	6,394,258	2,728	23,311,210	38,636,479	17,483,688
3 Annual Booked Therm Throughput	493,498,312	247,783,289	6,396,166	2,728	25,211,236	54,160,592	44,135,406
4 Proposed Sales Revenues	339,377,146	231,105,846	6,083,748	2,349	22,318,023	35,455,639	15,672,575
5 Total Annual Bills	3,395,936	2,666,494	400,515	144	200,206	56,195	7,432

Bay State Gas Company
D.T.E. 05-27
Attachment AG-22-44(1)
Page 255 of 322

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

30-Jun-05

11:19 AM

PRODUCTION COMPONENTS

INTERNALLY DEVELOPED CONT-32

	ALLOC	HIGH WINTER LRG HI ANNUAL G-43 & T-43	LOW WINTER LOW ANNUAL G-50 & T-50	LOW WINTER MED ANNUAL G-51 & T-51	LOW WINTER HIGH ANNUAL G-52 & T-52	LOW WINTER LRG HI ANNUAL G-53 & T-53
REVENUES FROM GAS SALES						
1 Revenues Firm Sales of Gas		4,903,279	5,775,878	15,241,815	9,011,447	8,317,714
2 Annual Base Revenues - Sales Actual		488,932	1,654,681	2,437,223	913,027	401,385
3 Annual Base Rev - Trans Actual		664,767	254,714	1,207,966	2,393,361	5,168,050
4 GAF Direct Revenues		3,381,173	3,503,816	10,545,356	5,181,132	2,490,440
5 Production & Storage Revenues		92,312	71,008	168,782	91,183	54,183
6 GAF Indirect Bad Debt Revenues		82,200	84,141	242,185	121,626	56,450
7 Weather Normalizn Adj Base Rev-Sales		(6,373)	0	0	0	0
8 Weather Normalizn Adj Base Rev-Trans		(6,584)	0	0	0	0
9 GAF Deferred Direct Gas Revenues		206,853	207,518	640,304	311,118	147,207
10 GAF Indirect Revenues		220,906	226,123	650,856	326,863	151,705

REVENUE REQUIREMENT INPUTS

1 Claimed Rate of Return	9.050%					9.050%
2 Annual Booked Therm Sales	4,431,946		4,446,204	13,718,907	6,665,891	3,153,997
3 Annual Booked Therm Throughput	9,468,031		5,243,986	21,369,383	25,505,268	54,222,227
4 Proposed Sales Revenues	3,990,054		4,012,321	12,089,570	5,838,327	2,808,694
5 Total Annual Bills	181		39,908	21,073	2,989	799

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

30-Jun-05 11:19 AM

PRODUCTION COMPONENTS

RATIO TABLE-33

CAPACITY RELATED

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
PRODUCTION ALLOCATORS																	
Design Day Remaining Demands - Sales																	
LPG Production Allocator - Prod Function																	
LNG Production Allocator - Prod Function																	
LPG & LNG Prod Alloc - Distr Function																	
LPG & LNG Distr Pressure Support %																	
PROD-PRESSURE SUPP ALLOC																	
LPG Prod & Pressure Support Alloc																	
LNG Prod & Pressure Support Alloc																	
GAS COST ALLOCATORS																	
Base Demand Gas Costs																	
Remaining Demand Gas Costs																	

DISTRIBUTION ALLOCATORS

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Distribution Allocator																	
Pension & PBOP Expense Allocator																	

ALOC	TOTAL COMPANY	RESIDENTIAL HEATING R-3 & R-4	RESIDENTIAL NON-HEATING R-1 & R-2	OUTDOOR LIGHTING	HIGH WINTER LOW ANNUAL G-40 & T-40	HIGH WINTER MED ANNUAL G-41 & T-41	HIGH WINTER HIGH ANNUAL G-42 & T-42
------	---------------	-------------------------------	-----------------------------------	------------------	------------------------------------	------------------------------------	-------------------------------------

1.00000	0.69669	0.00508	0.00000	0.08528	0.12724	0.04999
1.00000	0.69669	0.00508	0.00000	0.08528	0.12724	0.04999
1.00000	0.69669	0.00508	0.00000	0.08528	0.12724	0.04999
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
28.6%						

0.71400	0.49744	0.00363	0.00000	0.06089	0.09085	0.03569
0.71400	0.49744	0.00363	0.00000	0.06089	0.09085	0.03569
1.00000	0.61433	0.04784	0.00003	0.02681	0.05699	0.03264
1.00000	0.69669	0.00508	0.00000	0.08528	0.12724	0.04999

0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

30-Jun-05 11:19 AM

PRODUCTION COMPONENTS

RATIO TABLE-33

CAPACITY RELATED

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
PRODUCTION ALLOCATORS																	
1	Design Day Remaining Demands - Sales																
2	LPG Production Allocator - Prod Function																
3	LNG Production Allocator - Prod Function																
4	LPG & LNG Prod Alloc - Distr Function																
5	LPG & LNG Distr Pressure Support %																
6																	
7																	
8																	
9	PROD-PRESSURE SUPP ALLOC																
10	LPG Prod & Pressure Support Alloc																
11	LNG Prod & Pressure Support Alloc																
12																	
13	GAS COST ALLOCATORS																
14	Base Demand Gas Costs																
15	Remaining Demand Gas Costs																
16																	
17																	
18																	

DISTRIBUTION ALLOCATORS

1	Distribution Allocator																
2																	
3	Pension & PBOP Expense Allocator																
4																	
5																	
6																	
7																	
8																	
9																	
10																	
11																	
12																	
13																	
14																	
15																	
16																	
17																	
18																	

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

30-Jun-05 11:19 AM

PRODUCTION COMPONENTS

RATIO TABLE CONT-34

COMMODITY RELATED

- 1 Base Commodity Gas Costs
2 Remaining Commodity Gas Costs
3
4
5
6
7 Annual Therm Firm Sales Sendout
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35

ALOC	TOTAL COMPANY	RESIDENTIAL HEATING R-3 & R-4	RESIDENTIAL NON-HEATING R-1 & R-2	OUTDOOR LIGHTING	HIGH WINTER LOW ANNUAL G-40 & T-40	HIGH WINTER MED ANNUAL G-41 & T-41	HIGH WINTER HIGH ANNUAL G-42 & T-42
EBASE	1.00000	0.61477	0.04788	0.00003	0.02673	0.05719	0.03260
EREMAIN	1.00000	0.70111	0.00589	0.00000	0.07750	0.12371	0.05333
	1.00000	0.67688	0.01747	0.00001	0.06370	0.10558	0.04778

Bay State Gas Company
D.T.E. 05-27
Attachment AG-22-44(1)
Page 259 of 322

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

30-Jun-05 11:19 AM

PRODUCTION COMPONENTS

ALLOC	HIGH WINTER LRG HI ANNUAL G-43 & T-43	LOW WINTER LOW ANNUAL G-50 & T-50	LOW WINTER MED ANNUAL G-51 & T-51	LOW WINTER HIGH ANNUAL G-52 & T-52	LOW WINTER LRG HI ANNUAL G-53 & T-53

RATIO TABLE CONT-34

COMMODITY RELATED

	EBASE	EREMAIN
1 Base Commodity Gas Costs	0.01953	0.01467
2 Remaining Commodity Gas Costs	0.00876	0.00674
3		
4		
5		
6		
7 Annual Therm Firm Sales Sendout	0.01211	0.01822
8		0.00862
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		
31		
32		
33		
34		
35		

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

30-Jun-05 11:19 AM

PRODUCTION COMPONENTS

RATIO TABLE CONT-35

CUSTOMER RELATED

	ALLOC	TOTAL COMPANY	RESIDENTIAL HEATING R-3 & R-4	RESIDENTIAL NON-HEATING R-1 & R-2	OUTDOOR LIGHTING	HIGH WINTER LOW ANNUAL G-40 & T-40	HIGH WINTER MED ANNUAL G-41 & T-41	HIGH WINTER HIGH ANNUAL G-42 & T-42
1 Acct 380 Gas Services	CUST380	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
2 Acct 381 Gas Meters	CUST381	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
3 Acct 382 Meter Installations	CUST382	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
4 Acct 383 Gas Regulators	CUST383	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
5 Customer Deposits	CUSTDEP	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
6 Transportation Customers	CUSTTR	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
7 Acct 386.0 Gas Water Heaters	CUST3860	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
8 Acct 386.2 Cascade Diamond Boilers	CUST3862	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
9 Acct 386.3 Conversion Burners	CUST3863	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
10 Acct 487-Return Check Charges	CUST487	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
11 Acct 488-Rental Rev-W/H & Conv Burn	CUST488	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
12 Acct 882-Revenue Guardian Care & C/S	CUST882	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
13 Acct 902 Meter Reading Expense	CUST902	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
14 Acct 903-Cust Records & Collection Exp	CUST903	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
15 Acct 912-Demonstrating & Selling Exp	CUST912	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
16 Acct 913-Advertising Expense	CUST913	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
17 Acct 879-Customer Installations Exp	CUST879	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
18 Acct 903 Collections Expense	CUST903C	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
31								
32								
33								
34								
35								
36								
37								

Bay State Gas Company
D.T.E. 05-27
Attachment AG-22-44(1)
Page 261 of 322

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

30-Jun-05 11:19 AM

PRODUCTION COMPONENTS

RATIO TABLE CONT-35

CUSTOMER RELATED

	ALOC	HIGH WINTER LRG HI ANNUAL G-43 & T-43	LOW WINTER LOW ANNUAL G-50 & T-50	LOW WINTER MED ANNUAL G-51 & T-51	LOW WINTER HIGH ANNUAL G-52 & T-52	LOW WINTER LRG HI ANNUAL G-53 & T-53
1 Acct 380 Gas Services	CUST380	0.00000	0.00000	0.00000	0.00000	0.00000
2 Acct 381 Gas Meters	CUST381	0.00000	0.00000	0.00000	0.00000	0.00000
3 Acct 382 Meter Installations	CUST382	0.00000	0.00000	0.00000	0.00000	0.00000
4 Acct 383 Gas Regulators	CUST383	0.00000	0.00000	0.00000	0.00000	0.00000
5 Customer Deposits	CUSTDEP	0.00000	0.00000	0.00000	0.00000	0.00000
6 Transportation Customers	CUSTTR	0.00000	0.00000	0.00000	0.00000	0.00000
7 Acct 386.0 Gas Water Heaters	CUST3860	0.00000	0.00000	0.00000	0.00000	0.00000
8 Acct 386.2 Cascade Diamond Boilers	CUST3862	0.00000	0.00000	0.00000	0.00000	0.00000
9 Acct 386.3 Conversion Burners	CUST3863	0.00000	0.00000	0.00000	0.00000	0.00000
10 Acct 487-Return Check Charges	CUST487	0.00000	0.00000	0.00000	0.00000	0.00000
11 Acct 488-Rental Rev-W/H & Conv Burn	CUST488	0.00000	0.00000	0.00000	0.00000	0.00000
12 Acct 882-Revenue Guardian Care & C/S	CUST882	0.00000	0.00000	0.00000	0.00000	0.00000
13 Acct 902 Meter Reading Expense	CUST902	0.00000	0.00000	0.00000	0.00000	0.00000
14 Acct 903-Cust Records & Collection Exp	CUST903	0.00000	0.00000	0.00000	0.00000	0.00000
15 Acct 912-Demonstrating & Selling Exp	CUST912	0.00000	0.00000	0.00000	0.00000	0.00000
16 Acct 913-Advertising Expense	CUST913	0.00000	0.00000	0.00000	0.00000	0.00000
17 Acct 879-Customer Installations Exp	CUST879	0.00000	0.00000	0.00000	0.00000	0.00000
18 Acct 903 Collections Expense	CUST903C	0.00000	0.00000	0.00000	0.00000	0.00000
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						
33						
34						
35						
36						
37						

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

30-Jun-05 11:19 AM

PRODUCTION COMPONENTS

RATIO TABLE CONT-36

INTERNALLY DEVELOPED

UNCOLLECTIBLE ACCOUNTS

	ALLOC	TOTAL COMPANY	RESIDENTIAL HEATING R-3 & R-4	RESIDENTIAL NON-HEATING R-1 & R-2	OUTDOOR LIGHTING	HIGH WINTER LOW ANNUAL G-40 & T-40	HIGH WINTER MED ANNUAL G-41 & T-41	HIGH WINTER HIGH ANNUAL G-42 & T-42
1 Residential Heating Rate R-3 & R-4	C904R3	0.69740	0.69740	0.00000	0.00000	0.00000	0.00000	0.00000
2 Residential Non-Heating Rate R-1 & R-2	C904R1	0.35915	0.00000	0.35915	0.00000	0.00000	0.00000	0.00000
3 Outdoor Lighting	C904OL	0.87259	0.00000	0.00000	0.87259	0.00000	0.00000	0.00000
4 High Winter Low Annual Rate G40 & T40	C904R40	0.66429	0.00000	0.00000	0.00000	0.66429	0.00000	0.00000
5 High Winter Med Annual Rate G41 & T41	C904R41	0.73470	0.00000	0.00000	0.00000	0.00000	0.73470	0.00000
6 High Winter High Annual Rate G42 & T42	C904R42	0.65622	0.00000	0.00000	0.00000	0.00000	0.00000	0.65622
7 High Winter Large Annual Rate G43 & T43	C904R43	0.73385	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
8 Low Winter Low Annual Rate G50 & T50	C904R50	0.63124	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
9 Low Winter Med Annual Rate G51 & T51	C904T51	0.74287	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
10 Low Winter High Annual Rate G52 & T52	C904R52	0.62308	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
11 Low Winter Large Annual Rate G53 & T53	C904R53	0.32795	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

LATE PAYMENT CHARGES

12								
13								
14								
15 High Winter Low Annual Rate G40 & T40	C487R40	0.66429	0.00000	0.00000	0.00000	0.66429	0.00000	0.00000
16 High Winter Med Annual Rate G41 & T41	C487R41	0.73470	0.00000	0.00000	0.00000	0.00000	0.73470	0.00000
17 High Winter High Annual Rate G42 & T42	C487R42	0.65622	0.00000	0.00000	0.00000	0.00000	0.00000	0.65622
18 High Winter Large Annual Rate G43 & T43	C487R43	0.73385	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
19 Low Winter Low Annual Rate G50 & T50	C487R50	0.63124	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
20 Low Winter Med Annual Rate G51 & T51	C487T51	0.74287	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
21 Low Winter High Annual Rate G52 & T52	C487R52	0.62308	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
22 Low Winter Large Annual Rate G53 & T53	C487R53	0.32795	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Bay State Gas Company
D.T.E. 05-27
Attachment AG-22-44(1)
Page 263 of 322

PRODUCTION COMPONENTS		ALLOC		HIGH WINTER LRG HI ANNUAL G-43 & T-43	LOW WINTER LOW ANNUAL G-50 & T-50	LOW WINTER MED ANNUAL G-51 & T-51	LOW WINTER HIGH ANNUAL G-52 & T-52	LOW WINTER LRG HI ANNUAL G-53 & T-53
RATIO TABLE CONT-36								
INTERNALLY DEVELOPED								
UNCOLLECTIBLE ACCOUNTS								
1	Residential Heating Rate R-3 & R-4	C904R3	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
2	Residential Non-Heating Rate R-1 & R-2	C904R1	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
3	Outdoor Lighting	C904OL	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
4	High Winter Low Annual Rate G40 & T40	C904R40	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
5	High Winter Med Annual Rate G41 & T41	C904R41	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
6	High Winter High Annual Rate G42 & T42	C904R42	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
7	High Wint Large Annual Rate G43 & T43	C904R43	0.73385	0.00000	0.00000	0.00000	0.00000	0.00000
8	Low Winter Low Annual Rate G50 & T50	C904R50	0.00000	0.63124	0.00000	0.00000	0.00000	0.00000
9	Low Winter Med Annual Rate G51 & T51	C904T51	0.00000	0.00000	0.74287	0.00000	0.00000	0.00000
10	Low Winter High Annual Rate G52 & T52	C904R52	0.00000	0.00000	0.00000	0.00000	0.62308	0.00000
11	Low Wint Large Annual Rate G53 & T53	C904R53	0.00000	0.00000	0.00000	0.00000	0.00000	0.32795
12								
13								
14								
15	High Winter Low Annual Rate G40 & T40	C487R40	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
16	High Winter Med Annual Rate G41 & T41	C487R41	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
17	High Winter High Annual Rate G42 & T42	C487R42	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
18	High Wint Large Annual Rate G43 & T43	C487R43	0.73385	0.00000	0.00000	0.00000	0.00000	0.00000
19	Low Winter Low Annual Rate G50 & T50	C487R50	0.00000	0.63124	0.00000	0.00000	0.00000	0.00000
20	Low Winter Med Annual Rate G51 & T51	C487T51	0.00000	0.00000	0.74287	0.00000	0.00000	0.00000
21	Low Winter High Annual Rate G52 & T52	C487R52	0.00000	0.00000	0.00000	0.00000	0.62308	0.00000
22	Low Wint Large Annual Rate G53 & T53	C487R53	0.00000	0.00000	0.00000	0.00000	0.00000	0.32795
23								
24								
25								
26								
27								
28								
29								
30								
31								
32								
33								

30-Jun-05 11:19 AM

PRODUCTION COMPONENTS

ALLOC TOTAL COMPANY
INPUT

RATIO TABLE CONT-36

INTERNALLY DEVELOPED

UNCOLLECTIBLE ACCOUNTS

1	Residential Heating Rate R-3 & R-4	C904R3	Page 23 , Line 10, Col 2
2	Residential Non-Heating Rate R-1 & R-2	C904R1	Page 23 , Line 10, Col 3
3	Outdoor Lighting	C904OL	Page 23 , Line 10, Col 4
4	High Winter Low Annual Rate G40 & T40	C904R40	Page 23 , Line 10, Col 5
5	High Winter Med Annual Rate G41 & T41	C904R41	Page 23 , Line 10, Col 6
6	High Winter High Annual Rate G42 & T42	C904R42	Page 23 , Line 10, Col 7
7	High Wint Large Annual Rate G43 & T43	C904R43	Page 23 , Line 10, Col 8
8	Low Winter Low Annual Rate G50 & T50	C904R50	Page 23 , Line 10, Col 9
9	Low Winter Med Annual Rate G51 & T51	C904T51	Page 23 , Line 10, Col 10
10	Low Winter High Annual Rate G52 & T52	C904R52	Page 23 , Line 10, Col 11
11	Low Wint Large Annual Rate G53 & T53	C904R53	Page 23 , Line 10, Col 12

LATE PAYMENT CHARGES

12			
13			
14			
15	High Winter Low Annual Rate G40 & T40	C487R40	Page 23 , Line 10, Col 5
16	High Winter Med Annual Rate G41 & T41	C487R41	Page 23 , Line 10, Col 6
17	High Winter High Annual Rate G42 & T42	C487R42	Page 23 , Line 10, Col 7
18	High Wint Large Annual Rate G43 & T43	C487R43	Page 23 , Line 10, Col 8
19	Low Winter Low Annual Rate G50 & T50	C487R50	Page 23 , Line 10, Col 9
20	Low Winter Med Annual Rate G51 & T51	C487T51	Page 23 , Line 10, Col 10
21	Low Winter High Annual Rate G52 & T52	C487R52	Page 23 , Line 10, Col 11
22	Low Wint Large Annual Rate G53 & T53	C487R53	Page 23 , Line 10, Col 12

23
24
25
26
27
28
29
30
31
32
33

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

30-Jun-05 11:19 AM

PRODUCTION COMPONENTS

INTERNALLY DEVELOPED-37

	ALLOC	TOTAL COMPANY	RESIDENTIAL HEATING R-3 & R-4	RESIDENTIAL NON-HEATING R-1 & R-2	OUTDOOR LIGHTING	HIGH WINTER LOW ANNUAL G-40 & T-40	HIGH WINTER MED ANNUAL G-41 & T-41	HIGH WINTER HIGH ANNUAL G-42 & T-42
1 Total Gas Plant In Service	PLANT	0.02545	0.01775	0.00014	0.00000	0.00217	0.00322	0.00126
2 Sum of Allocated Labor Expense	LABOR	0.03819	0.02684	0.00031	0.00000	0.00325	0.00463	0.00181
3 Acct 301 Organization	PLT301	0.02545	0.01775	0.00014	0.00000	0.00217	0.00322	0.00126
4 Acct 303 Misc. Intangible Plant	PLT303	0.03819	0.02684	0.00031	0.00000	0.00325	0.00463	0.00181
5 Acct 305 Structures & Improvements	PLT305	0.71400	0.49744	0.00363	0.00000	0.06089	0.09085	0.03569
6 Acct 311 L.P. Gas Equipment	PLT311	0.71400	0.49744	0.00363	0.00000	0.06089	0.09085	0.03569
7 Acct 320 Other Equipment	PLT320	0.71400	0.49744	0.00363	0.00000	0.06089	0.09085	0.03569
8 Acct 321 L.N.G. Equipment	PLT321	0.71400	0.49744	0.00363	0.00000	0.06089	0.09085	0.03569
9 Acct 365 Right of Way	PLT365	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
10 Acct 366 Structures & Improvements	PLT366	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
11 Acct 367 Gas Mains	PLT367	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
12 Acct 368 Compressor Station Equipment	PLT368	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
13 Acct 369 Meas. & Reg. Station Equip	PLT369	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
14 Acct 380 Gas Services	PLT380	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
15 Acct 381 Gas Meters	PLT381	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
16 Acct 382 Meter Installations	PLT382	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
17 Acct 383 Gas Regulators	PLT383	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
18 Acct 386 Gas Water Heaters	PLT386	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
19 Acct 386 Cascade Diamond Boilers	PLT3862	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
20 Acct 386 Conversion Burners	PLT3863	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
21 Acct 387 Other Equipment	PLT387	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
22 Acct 379 Other Equipment	PLT379	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
23 Acct 390 Structures & Improvements	PLT390	0.03819	0.02684	0.00031	0.00000	0.00325	0.00463	0.00181
24 Acct 391 Office Equipment	PLT391	0.03819	0.02684	0.00031	0.00000	0.00325	0.00463	0.00181
25 Acct 392 Transportation Equipment	PLT392	0.03819	0.02684	0.00031	0.00000	0.00325	0.00463	0.00181
26 Acct 393 Stores Equipment	PLT393	0.03819	0.02684	0.00031	0.00000	0.00325	0.00463	0.00181
27 Acct 394 Tools, Shop & Garage Equip	PLT394	0.03819	0.02684	0.00031	0.00000	0.00325	0.00463	0.00181
28 Acct 396 Power Operated Equipment	PLT396	0.03819	0.02684	0.00031	0.00000	0.00325	0.00463	0.00181
29 Acct 397 Communication Equip-Other	PLT397Q	0.03819	0.02684	0.00031	0.00000	0.00325	0.00463	0.00181
30 Acct 398 Miscellaneous Equipment	PLT398	0.03819	0.02684	0.00031	0.00000	0.00325	0.00463	0.00181
31 LPG Gas Prod Labor Accts 717 to 735	LABPO	0.71400	0.49744	0.00363	0.00000	0.06089	0.09085	0.03569
32 Acct 717-LPG Gas Expenses	EXP717	0.71400	0.49744	0.00363	0.00000	0.06089	0.09085	0.03569
33 Acct 719-Handling Expense	EXP719	0.71400	0.49744	0.00363	0.00000	0.06089	0.09085	0.03569
34 Acct 735-Miscellaneous Production Exp	EXP735	0.71400	0.49744	0.00363	0.00000	0.06089	0.09085	0.03569
35 LPG Gas Prod Labor Accts 741 to 742	LABPM	0.71400	0.49744	0.00363	0.00000	0.06089	0.09085	0.03569
36 Acct 741-Maintenance of Struct & Improv	EXP741	0.71400	0.49744	0.00363	0.00000	0.06089	0.09085	0.03569
37 Acct 742-Maintenance of Production Eq	EXP742	0.71400	0.49744	0.00363	0.00000	0.06089	0.09085	0.03569
38 LNG Gas Prod Labor Accts 754 to 777	LABLO	0.71400	0.49744	0.00363	0.00000	0.06089	0.09085	0.03569
39 Acct 754-Liquefaction Expense	EXP754	0.71400	0.49744	0.00363	0.00000	0.06089	0.09085	0.03569
40 Acct 757-Vaporization Expense	EXP757	0.71400	0.49744	0.00363	0.00000	0.06089	0.09085	0.03569

Bay State Gas Company
D.T.E. 05-27
Attachment AG-22-44(1)
Page 266 of 322

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

30-Jun-05 11:19 AM

PRODUCTION COMPONENTS

INTERNALLY DEVELOPED-37

	ALLOC	HIGH WINTER LRG HI ANNUAL G-43 & T-43	LOW WINTER LOW ANNUAL G-50 & T-50	LOW WINTER MED ANNUAL G-51 & T-51	LOW WINTER HIGH ANNUAL G-52 & T-52	LOW WINTER LRG HI ANNUAL G-53 & T-53
1 Total Gas Plant In Service	PLANT	0.00030	0.00011	0.00030	0.00009	0.00011
2 Sum of Allocated Labor Expense	LABOR	0.00042	0.00019	0.00045	0.00013	0.00016
3 Acct 301 Organization	PLT301	0.00030	0.00011	0.00030	0.00009	0.00011
4 Acct 303 Misc. Intangible Plant	PLT303	0.00042	0.00019	0.00045	0.00013	0.00016
5 Acct 305 Structures & Improvements	PLT305	0.00038	0.00030	0.00047	0.00249	0.00316
6 Acct 311 L.P. Gas Equipment	PLT311	0.00838	0.00300	0.00847	0.00249	0.00316
7 Acct 320 Other Equipment	PLT320	0.00838	0.00300	0.00847	0.00249	0.00316
8 Acct 321 L.N.G. Equipment	PLT321	0.00838	0.00300	0.00847	0.00249	0.00316
9 Acct 365 Right of Way	PLT365	0.00000	0.00000	0.00000	0.00000	0.00000
10 Acct 366 Structures & Improvements	PLT366	0.00000	0.00000	0.00000	0.00000	0.00000
11 Acct 367 Gas Mains	PLT367	0.00000	0.00000	0.00000	0.00000	0.00000
12 Acct 368 Compressor Station Equipment	PLT368	0.00000	0.00000	0.00000	0.00000	0.00000
13 Acct 369 Meas. & Reg. Station Equip	PLT369	0.00000	0.00000	0.00000	0.00000	0.00000
14 Acct 380 Gas Services	PLT380	0.00000	0.00000	0.00000	0.00000	0.00000
15 Acct 381 Gas Meters	PLT381	0.00000	0.00000	0.00000	0.00000	0.00000
16 Acct 382 Meter Installations	PLT382	0.00000	0.00000	0.00000	0.00000	0.00000
17 Acct 383 Gas Regulators	PLT383	0.00000	0.00000	0.00000	0.00000	0.00000
18 Acct 386 Gas Water Heaters	PLT386	0.00000	0.00000	0.00000	0.00000	0.00000
19 Acct 386 Cascade Diamond Boilers	PLT3862	0.00000	0.00000	0.00000	0.00000	0.00000
20 Acct 386 Conversion Burners	PLT3863	0.00000	0.00000	0.00000	0.00000	0.00000
21 Acct 387 Other Equipment	PLT387	0.00000	0.00000	0.00000	0.00000	0.00000
22 Acct 379 Other Equipment	PLT379	0.00000	0.00000	0.00000	0.00000	0.00000
23 Acct 390 Structures & Improvements	PLT390	0.00042	0.00019	0.00045	0.00013	0.00016
24 Acct 391 Office Equipment	PLT391	0.00042	0.00019	0.00045	0.00013	0.00016
25 Acct 392 Transportation Equipment	PLT392	0.00042	0.00019	0.00045	0.00013	0.00016
26 Acct 393 Stores Equipment	PLT393	0.00042	0.00019	0.00045	0.00013	0.00016
27 Acct 394 Tools, Shop & Garage Equip	PLT394	0.00042	0.00019	0.00045	0.00013	0.00016
28 Acct 396 Power Operated Equipment	PLT396	0.00042	0.00019	0.00045	0.00013	0.00016
29 Acct 397 Communication Equip-Other	PLT397O	0.00042	0.00019	0.00045	0.00013	0.00016
30 Acct 398 Miscellaneous Equipment	PLT398	0.00042	0.00019	0.00045	0.00013	0.00016
31 LPG Gas Prod Labor Accts 717 to 735	LABPO	0.00838	0.00300	0.00847	0.00249	0.00316
32 Acct 717-LPG Gas Expenses	EXP717	0.00838	0.00300	0.00847	0.00249	0.00316
33 Acct 719-Handling Expense	EXP719	0.00838	0.00300	0.00847	0.00249	0.00316
34 Acct 735-Miscellaneous Production Exp	EXP735	0.00838	0.00300	0.00847	0.00249	0.00316
35 LPG Gas Prod Labor Accts 741 to 742	LABPM	0.00838	0.00300	0.00847	0.00249	0.00316
36 Acct 741-Maintenance of Struct & Improv	EXP741	0.00838	0.00300	0.00847	0.00249	0.00316
37 Acct 742-Maintenance of Production Eq	EXP742	0.00838	0.00300	0.00847	0.00249	0.00316
38 LNG Gas Prod Labor Accts 754 to 777	LABLO	0.00838	0.00300	0.00847	0.00249	0.00316
39 Acct 754-Liquefaction Expense	EXP754	0.00838	0.00300	0.00847	0.00249	0.00316
40 Acct 757-Vaporization Expense	EXP757	0.00838	0.00300	0.00847	0.00249	0.00316

30-Jun-05 11:19 AM

PRODUCTION COMPONENTS

ALLOC TOTAL COMPANY INPUT

INTERNALLY DEVELOPED-37

1	Total Gas Plant In Service	PLANT	Page 4, Line 18
2	Sum of Allocated Labor Expense	LABOR	Page 22, Line 21
3	Acct 301 Organization	PLT301	Page 2, Line 3
4	Acct 303 Misc. Intangible Plant	PLT303	Page 2, Line 4
5	Acct 305 Structures & Improvements	PLT305	Page 2, Line 13
6	Acct 311 L.P. Gas Equipment	PLT311	Page 2, Line 14
7	Acct 320 Other Equipment	PLT320	Page 2, Line 18
8	Acct 321 L.N.G. Equipment	PLT321	Page 2, Line 19
9	Acct 365 Right of Way	PLT365	Page 3, Line 2
10	Acct 366 Structures & Improvements	PLT366	Page 3, Line 3
11	Acct 367 Gas Mains	PLT367	Page 3, Line 11
12	Acct 368 Compressor Station Equipment	PLT368	Page 3, Line 12
13	Acct 369 Meas. & Reg. Station Equip	PLT369	Page 3, Line 13
14	Acct 380 Gas Services	PLT380	Page 3, Line 14
15	Acct 381 Gas Meters	PLT381	Page 3, Line 15
16	Acct 382 Meter Installations	PLT382	Page 3, Line 16
17	Acct 383 Gas Regulators	PLT383	Page 3, Line 17
18	Acct 386 Gas Water Heaters	PLT386	Page 3, Line 18
19	Acct 386 Cascade Diamond Boilers	PLT3862	Page 3, Line 19
20	Acct 386 Conversion Burners	PLT3863	Page 3, Line 20
21	Acct 387 Other Equipment	PLT387	Page 3, Line 22
22	Acct 379 Other Equipment	PLT379	Page 3, Line 24
23	Acct 390 Structures & Improvements	PLT390	Page 4, Line 2
24	Acct 391 Office Equipment	PLT391	Page 4, Line 6
25	Acct 392 Transportation Equipment	PLT392	Page 4, Line 7
26	Acct 393 Stores Equipment	PLT393	Page 4, Line 8
27	Acct 394 Tools, Shop & Garage Equip	PLT394	Page 4, Line 9
28	Acct 396 Power Operated Equipment	PLT396	Page 4, Line 10
29	Acct 397 Communication Equip-Other	PLT397O	Page 4, Line 11
30	Acct 398 Miscellaneous Equipment	PLT398	Page 4, Line 16
31	LPG Gas Prod Labor Accts 717 to 735	LABPO	Pg 19, Ln 2 to 4
32	Acct 717-LPG Gas Expenses	EXP717	Page 9, Line 2
33	Acct 719-Handling Expense	EXP719	Page 9, Line 3
34	Acct 735-Miscellaneous Production Exp	EXP735	Page 9, Line 6
35	LPG Gas Prod Labor Accts 741 to 742	LABPM	Pg 19, Ln 9 to 10
36	Acct 741-Maintenance of Struct & Improv	EXP741	Page 9, Line 9
37	Acct 742-Maintenance of Production Eq	EXP742	Page 9, Line 10
38	LNG Gas Prod Labor Accts 754 to 777	LABLO	Pg 19, Ln 14 to 18
39	Acct 754-Liquefaction Expense	EXP754	Page 9, Line 14
40	Acct 757-Vaporization Expense	EXP757	Page 9, Line 15

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

30-Jun-05 11:19 AM

PRODUCTION COMPONENTS

INTERNALLY DEVELOPED CONT-38

	ALLOC	TOTAL COMPANY	RESIDENTIAL HEATING R-3 & R-4	RESIDENTIAL NON-HEATING R-1 & R-2	OUTDOOR LIGHTING	HIGH WINTER LOW ANNUAL G-40 & T-40	HIGH WINTER MED ANNUAL G-41 & T-41	HIGH WINTER HIGH ANNUAL G-42 & T-42
1 Acct 759-Handling Expense	EXP759	0.71400	0.49744	0.00363	0.00000	0.06089	0.09085	0.03569
2 Acct 775-Miscellaneous Production Exp	EXP775	0.71400	0.49744	0.00363	0.00000	0.06089	0.09085	0.03569
3 Acct 777-Lease Expense	EXP777	0.71400	0.49744	0.00363	0.00000	0.06089	0.09085	0.03569
4 LNG Gas Prod Labor Accts 781 to 782	LABLM	0.71400	0.49744	0.00363	0.00000	0.06089	0.09085	0.03569
5 Acct 781-Maintenance of Struct & Improv	EXP781	0.71400	0.49744	0.00363	0.00000	0.06089	0.09085	0.03569
6 Acct 782-Maintenance of Production Eq	EXP782	0.71400	0.49744	0.00363	0.00000	0.06089	0.09085	0.03569
7 Total Intangible Plant	INTPLT	0.03794	0.02666	0.00031	0.00000	0.00323	0.00460	0.00180
8 Total Production Plant	PRODPLT	0.71400	0.49744	0.00363	0.00000	0.06089	0.09085	0.03569
9 Trans & Distr Op Labor Accts 851 to 881	LABDO	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
10 Acct 851-Sys Control & Load Dispatch	EXP851	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
11 Acct 852-Communication System Exp	EXP852	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
12 Acct 857-Measuring & Regul Stat Exp	EXP857	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
13 Acct 874-Mains and Services Exp	EXP874	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
14 Acct 878-Meter & House Regulator Exp	EXP878	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
15 Acct 879-Customer Installations Exp	EXP879	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
16 Acct 880-Other Expenses	EXP880	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
17 Acct 881-Rents	EXP881	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
18 Trans & Distr Maint Lab Accts 851 to 881	LABDM	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
19 Acct 886-Maintenance of Struct & Improv	EXP886	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
20 Acct 887-Maintenance of Mains	EXP887	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
21 Acct 888-Maint of Compressor Station Eq	EXP888	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
22 Acct 889-Maint of Meas & Reg Station Eq	EXP889	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
23 Acct 892-Maintenance of Services	EXP892	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
24 Acct 893-Mnt of Meters and House Regul	EXP893	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
25 Acct 894-Maintenance of Other Equip	EXP894	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
26 Customer Accts Labor Accts 902 to 903	LABCA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
27 Acct 902-Meter Reading Expenses	EXP902	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
28 Acct 903-Cust Records & Collection Exp	EXP903	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
29 Sales Expenses Labor Accts 912 to 916	LABSA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
30 Acct 912-Demonstrating & Selling Exp	EXP912	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
31 Acct 913-Advertising Exp	EXP913	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
32 Acct 916-Miscellaneous Sales Exp	EXP916	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
33 Acct 920-Administrative & General Sal	EXP920	0.08443	0.06425	0.00316	0.00000	0.00700	0.00533	0.00184
34 Acct 921-Office Supplies & Expenses	EXP921	0.08443	0.06425	0.00316	0.00000	0.00700	0.00533	0.00184
35 Acct 922-Administrative Exp Transf-Cr	EXP922	0.08443	0.06425	0.00316	0.00000	0.00700	0.00533	0.00184
36 Acct 923-Outside Services Employed	EXP923	0.11631	0.08271	0.00299	0.00000	0.00874	0.01035	0.00422
37 Acct 924-Property Insurance	EXP924	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
38 Acct 925-Injuries & Damages	EXP925	0.08443	0.06425	0.00316	0.00000	0.00700	0.00533	0.00184
39 Acct 926-Employees Pensions & Benef	EXP926	0.02522	0.01773	0.00020	0.00000	0.00215	0.00306	0.00119
40 Acct 928-Regulatory Commission Exp	EXP928	0.08443	0.06425	0.00316	0.00000	0.00700	0.00533	0.00184

Bay State Gas Company
D.T.E. 05-27
Attachment AG-22-44(1)
Page 269 of 322

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

30-Jun-05 11:19 AM

PRODUCTION COMPONENTS

INTERNALLY DEVELOPED CONT-38

	ALLOC	HIGH WINTER LRG HI ANNUAL G-43 & T-43	LOW WINTER LOW ANNUAL G-50 & T-50	LOW WINTER MED ANNUAL G-51 & T-51	LOW WINTER HIGH ANNUAL G-52 & T-52	LOW WINTER LRG HI ANNUAL G-53 & T-53
1 Acct 759-Handling Expense	EXP759	0.00838	0.00300	0.00847	0.00249	0.00316
2 Acct 775-Miscellaneous Production Exp	EXP775	0.00838	0.00300	0.00847	0.00249	0.00316
3 Acct 777-Lease Expense	EXP777	0.00838	0.00300	0.00847	0.00249	0.00316
4 LNG Gas Prod Labor Accts 781 to 782	LABLM	0.00838	0.00300	0.00847	0.00249	0.00316
5 Acct 781-Maintenance of Struct & Improv	EXP781	0.00838	0.00300	0.00847	0.00249	0.00316
6 Acct 782-Maintenance of Production Eq	EXP782	0.00838	0.00300	0.00847	0.00249	0.00316
7 Total Intangible Plant	INTPLT	0.00042	0.00019	0.00045	0.00013	0.00016
8 Total Production Plant	PRODPLT	0.00838	0.00300	0.00847	0.00249	0.00316
9 Trans & Distr Op Labor Accts 851 to 881	LABDO	0.00000	0.00000	0.00000	0.00000	0.00000
10 Acct 851-Sys Control & Load Dispatch	EXP851	0.00000	0.00000	0.00000	0.00000	0.00000
11 Acct 852-Communication System Exp	EXP852	0.00000	0.00000	0.00000	0.00000	0.00000
12 Acct 857-Measuring & Regul Stat Exp	EXP857	0.00000	0.00000	0.00000	0.00000	0.00000
13 Acct 874-Mains and Services Exp	EXP874	0.00000	0.00000	0.00000	0.00000	0.00000
14 Acct 878-Meter & House Regulator Exp	EXP878	0.00000	0.00000	0.00000	0.00000	0.00000
15 Acct 879-Customer Installations Exp	EXP879	0.00000	0.00000	0.00000	0.00000	0.00000
16 Acct 880-Other Expenses	EXP880	0.00000	0.00000	0.00000	0.00000	0.00000
17 Acct 881-Rents	EXP881	0.00000	0.00000	0.00000	0.00000	0.00000
18 Trans & Distr Maint Lab Accts 851 to 881	LABDM	0.00000	0.00000	0.00000	0.00000	0.00000
19 Acct 886-Maintenance of Struct & Improv	EXP886	0.00000	0.00000	0.00000	0.00000	0.00000
20 Acct 887-Maintenance of Mains	EXP887	0.00000	0.00000	0.00000	0.00000	0.00000
21 Acct 888-Maint of Compressor Station Eq	EXP888	0.00000	0.00000	0.00000	0.00000	0.00000
22 Acct 889-Maint of Meas & Reg Station Eq	EXP889	0.00000	0.00000	0.00000	0.00000	0.00000
23 Acct 892-Maintenance of Services	EXP892	0.00000	0.00000	0.00000	0.00000	0.00000
24 Acct 893-Mnt of Meters and House Regul	EXP893	0.00000	0.00000	0.00000	0.00000	0.00000
25 Acct 894-Maintenance of Other Equip	EXP894	0.00000	0.00000	0.00000	0.00000	0.00000
26 Customer Accts Labor Accts 902 to 903	LABCA	0.00000	0.00000	0.00000	0.00000	0.00000
27 Acct 902-Meter Reading Expenses	EXP902	0.00000	0.00000	0.00000	0.00000	0.00000
28 Acct 903-Cust Records & Collection Exp	EXP903	0.00000	0.00000	0.00000	0.00000	0.00000
29 Sales Expenses Labor Accts 912 to 916	LABSA	0.00000	0.00000	0.00000	0.00000	0.00000
30 Acct 912-Demonstrating & Selling Exp	EXP912	0.00000	0.00000	0.00000	0.00000	0.00000
31 Acct 913-Advertising Exp	EXP913	0.00000	0.00000	0.00000	0.00000	0.00000
32 Acct 916-Miscellaneous Sales Exp	EXP916	0.00000	0.00000	0.00000	0.00000	0.00000
33 Acct 920-Administrative & General Sal	EXP920	0.00042	0.00098	0.00099	0.00026	0.00021
34 Acct 921-Office Supplies & Expenses	EXP921	0.00042	0.00098	0.00099	0.00026	0.00021
35 Acct 922-Administrative Exp Transf-Cr	EXP922	0.00042	0.00098	0.00099	0.00026	0.00066
36 Acct 923-Outside Services Employed	EXP923	0.00104	0.00137	0.00294	0.00127	0.00066
37 Acct 924-Property Insurance	EXP924	0.00000	0.00000	0.00000	0.00000	0.00000
38 Acct 925-Injuries & Damages	EXP925	0.00042	0.00098	0.00099	0.00026	0.00021
39 Acct 926-Employees Pensions & Benef	EXP926	0.00028	0.00012	0.00030	0.00009	0.00011
40 Acct 928-Regulatory Commission Exp	EXP928	0.00042	0.00098	0.00099	0.00026	0.00021

PRODUCTION COMPONENTS

INTERNALLY DEVELOPED CONT-38		ALLOC	TOTAL COMPANY INPUT
1	Acct 759-Handling Expense	EXP759	Page 9, Line 17
2	Acct 775-Miscellaneous Production Exp	EXP775	Page 9, Line 20
3	Acct 777-Lease Expense	EXP777	Page 9, Line 21
4	LNG Gas Prod Labor Accts 781 to 782	LABLM	Pg 19, Ln 21 to 22
5	Acct 781-Maintenance of Struct & Improv	EXP781	Page 9, Line 24
6	Acct 782-Maintenance of Production Eq	EXP782	Page 9, Line 25
7	Total Intangible Plant	INTPLT	Page 2, Line 5
8	Total Production Plant	PRODPLT	Page 2, Line 20
9	Trans & Distr Op Labor Accts 851 to 881	LABDO	Pg 20, Ln 2 to 9
10	Acct 851-Sys Control & Load Dispatch	EXP851	Page 11, Line 2
11	Acct 852-Communication System Exp	EXP852	Page 11, Line 3
12	Acct 857-Measuring & Regul Stat Exp	EXP857	Page 11, Line 4
13	Acct 874-Mains and Services Exp	EXP874	Page 11, Line 5
14	Acct 878-Meter & House Regulator Exp	EXP878	Page 11, Line 6
15	Acct 879-Customer Installations Exp	EXP879	Page 11, Line 7
16	Acct 880-Other Expenses	EXP880	Page 11, Line 8
17	Acct 881-Rents	EXP881	Page 11, Line 9
18	Trans & Distr Maint Lab Accts 851 to 881	LABDM	Pg 20, Ln 12 to 18
19	Acct 886-Maintenance of Struct & Improv	EXP886	Page 11, Line 12
20	Acct 887-Maintenance of Mains	EXP887	Page 11, Line 13
21	Acct 888-Maint of Compressor Station Eq	EXP888	Page 11, Line 14
22	Acct 889-Maint of Meas & Reg Station Eq	EXP889	Page 11, Line 15
23	Acct 892-Maintenance of Services	EXP892	Page 11, Line 16
24	Acct 893-Mnt of Meters and House Regul	EXP893	Page 11, Line 17
25	Acct 894-Maintenance of Other Equip	EXP894	Page 11, Line 18
26	Customer Accts Labor Accts 902 to 903	LABCA	Pg 21, Ln 2 to 3
27	Acct 902-Meter Reading Expenses	EXP902	Page 12, Line 2
28	Acct 903-Cust Records & Collection Exp	EXP903	Page 12, Line 8
29	Sales Expenses Labor Accts 912 to 916	LABSA	Pg 21, Ln 6 to 8
30	Acct 912-Demonstrating & Selling Exp	EXP912	Page 12, Line 28
31	Acct 913-Advertising Exp	EXP913	Page 12, Line 32
32	Acct 916-Miscellaneous Sales Exp	EXP916	Page 12, Line 33
33	Acct 920-Administrative & General Sal	EXP920	Page 13, Line 1
34	Acct 921-Office Supplies & Expenses	EXP921	Page 13, Line 4
35	Acct 922-Administrative Exp Transf-Cr	EXP922	Page 13, Line 5
36	Acct 923-Outside Services Employed	EXP923	Page 13, Line 38
37	Acct 924-Property Insurance	EXP924	Page 13, Line 39
38	Acct 925-Injuries & Damages	EXP925	Page 13, Line 43
39	Acct 926-Employees Pensions & Benef	EXP926	Page 14, Line 4
40	Acct 928-Regulatory Commission Exp	EXP928	Page 14, Line 7

PRODUCTION COMPONENTS

INTERNALLY DEVELOPED CONT-39

ALOC	TOTAL COMPANY	RESIDENTIAL HEATING R-3 & R-4	RESIDENTIAL NON-HEATING R-1 & R-2	OUTDOOR LIGHTING	HIGH WINTER LOW ANNUAL G-40 & T-40	HIGH WINTER MED ANNUAL G-41 & T-41	HIGH WINTER HIGH ANNUAL G-42 & T-42
EXP929	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
EXP930	0.08443	0.06425	0.00316	0.00000	0.00700	0.00533	0.00184
EXP931	0.02663	0.02026	0.00100	0.00000	0.00221	0.00168	0.00058
EXP932	0.03493	0.02455	0.00028	0.00000	0.00297	0.00423	0.00165
TLABPO	0.71400	0.49744	0.00363	0.00000	0.06089	0.09085	0.03569
TLABPM	0.71400	0.49744	0.00363	0.00000	0.06089	0.09085	0.03569
TLABLO	0.71400	0.49744	0.00363	0.00000	0.06089	0.09085	0.03569
TLABLM	0.71400	0.49744	0.00363	0.00000	0.06089	0.09085	0.03569
TLABDO	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
TLABDM	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
TLABCA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
TLABSA	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
GENPLT	0.03493	0.02455	0.00028	0.00000	0.00297	0.00423	0.00165
REVCLAIM	0.08443	0.06425	0.00316	0.00000	0.00700	0.00533	0.00184
EXP9123	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
PLT36780	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
PLT3813	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
PLT3803	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
EXP8519	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
TOTCDEP	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
PLT386	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
DISTRPLT	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
EXP904S	0.65692	0.50660	0.03926	0.00000	0.06637	0.02070	0.00245
EXP904O	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
PLT367BS	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
PLT367JC	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
PLT367CI	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
PLT367CP	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
PLT367CS	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
PLT367P	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
PLT391OE	0.03819	0.02684	0.00031	0.00000	0.00325	0.00463	0.00181
PLT391IT	0.03819	0.02684	0.00031	0.00000	0.00325	0.00463	0.00181
PLT397M	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
PLT397E	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
PLT304L	0.71400	0.49744	0.00363	0.00000	0.06089	0.09085	0.03569
PLT305L	0.71400	0.49744	0.00363	0.00000	0.06089	0.09085	0.03569
PLT320L	0.71400	0.49744	0.00363	0.00000	0.06089	0.09085	0.03569
OMLAB	0.04521	0.03177	0.00037	0.00000	0.00385	0.00548	0.00214
OTHOMINF	0.05097	0.03568	0.00035	0.00000	0.00434	0.00631	0.00247

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

30-Jun-05 11:19 AM

PRODUCTION COMPONENTS

INTERNALLY DEVELOPED CONT-39

ALLOC	HIGH WINTER LRG HI ANNUAL G-43 & T-43	LOW WINTER LOW ANNUAL G-50 & T-50	LOW WINTER MED ANNUAL G-51 & T-51	LOW WINTER HIGH ANNUAL G-52 & T-52	LOW WINTER LRG HI ANNUAL G-53 & T-53
EXP929	0.00000	0.00000	0.00000	0.00000	0.00000
2 Act 929-Duplicate Charges-Cr	0.00042	0.00098	0.00099	0.00026	0.00021
EXP930	0.00042	0.00098	0.00099	0.00026	0.00021
3 Act 930-Miscellaneous General Exp	0.00031	0.00031	0.00031	0.00008	0.00006
EXP931	0.00031	0.00031	0.00031	0.00008	0.00006
4 Act 932 Maintenance of General Plant	0.00039	0.00017	0.00041	0.00012	0.00015
EXP932	0.00039	0.00017	0.00041	0.00012	0.00015
5 Total LPG Gas Operating Labor	0.00838	0.00300	0.00847	0.00249	0.00316
TLABPO	0.00838	0.00300	0.00847	0.00249	0.00316
6 Tot LPG Gas Maintenance Labor	0.00838	0.00300	0.00847	0.00249	0.00316
TLABPM	0.00838	0.00300	0.00847	0.00249	0.00316
7 Total LNG Gas Operating Labor	0.00838	0.00300	0.00847	0.00249	0.00316
TLABLO	0.00838	0.00300	0.00847	0.00249	0.00316
8 Tot LNG Gas Maintenance Labor	0.00838	0.00300	0.00847	0.00249	0.00316
TLABLM	0.00838	0.00300	0.00847	0.00249	0.00316
9 Total Transm & Distr Operating Labor	0.00000	0.00000	0.00000	0.00000	0.00000
TLABDO	0.00000	0.00000	0.00000	0.00000	0.00000
10 Total Transm & Distr Maintenance Labor	0.00000	0.00000	0.00000	0.00000	0.00000
TLABDM	0.00000	0.00000	0.00000	0.00000	0.00000
11 Total Customer Accounts Labor	0.00000	0.00000	0.00000	0.00000	0.00000
TLABCA	0.00000	0.00000	0.00000	0.00000	0.00000
12 Total Sales Expense Labor	0.00000	0.00000	0.00000	0.00000	0.00000
TLABSA	0.00000	0.00000	0.00000	0.00000	0.00000
13 Total General Plant	0.00039	0.00017	0.00041	0.00012	0.00015
GENPLT	0.00039	0.00017	0.00041	0.00012	0.00015
14 Claimed Sales Revenues less Gas Costs	0.00042	0.00098	0.00099	0.00026	0.00021
REVCLAIM	0.00042	0.00098	0.00099	0.00026	0.00021
15 Sales Expense Accounts 912 to 913	0.00000	0.00000	0.00000	0.00000	0.00000
EXP9123	0.00000	0.00000	0.00000	0.00000	0.00000
16 Act 367 Mains and Act 360 Services	0.00000	0.00000	0.00000	0.00000	0.00000
PLT36780	0.00000	0.00000	0.00000	0.00000	0.00000
17 Act 381, 382 & 383 - Meters & Hse Reg	0.00000	0.00000	0.00000	0.00000	0.00000
PLT3813	0.00000	0.00000	0.00000	0.00000	0.00000
18 Act 380,381,382 & 383 - Serv,Met & Reg	0.00000	0.00000	0.00000	0.00000	0.00000
PLT3803	0.00000	0.00000	0.00000	0.00000	0.00000
19 Transm & Distr Oper Accts 851 to 879	0.00000	0.00000	0.00000	0.00000	0.00000
EXP8519	0.00000	0.00000	0.00000	0.00000	0.00000
20 Total Customer Deposits	0.00000	0.00000	0.00000	0.00000	0.00000
TOTCDEP	0.00000	0.00000	0.00000	0.00000	0.00000
21 Act 386 Other Property on Cust's Prem	0.00000	0.00000	0.00000	0.00000	0.00000
PLT386	0.00000	0.00000	0.00000	0.00000	0.00000
22 Total Transmission & Distribution Plant	0.00000	0.00000	0.00000	0.00000	0.00000
DISTRPLT	0.00000	0.00000	0.00000	0.00000	0.00000
23 Act 904-Uncollectible Accts-Gas Sales	0.00007	0.01258	0.00784	0.00093	0.00013
EXP904S	0.00007	0.01258	0.00784	0.00093	0.00013
24 Act 904-Uncollectible Accts-Other Rev	0.00000	0.00000	0.00000	0.00000	0.00000
EXP904O	0.00000	0.00000	0.00000	0.00000	0.00000
25 Act 367-Gas Mains - Bare Steel	0.00000	0.00000	0.00000	0.00000	0.00000
PLT367BS	0.00000	0.00000	0.00000	0.00000	0.00000
26 Act 367-Gas Mains - Joint Clamping	0.00000	0.00000	0.00000	0.00000	0.00000
PLT367JC	0.00000	0.00000	0.00000	0.00000	0.00000
27 Act 367-Gas Mains - Cast Iron	0.00000	0.00000	0.00000	0.00000	0.00000
PLT367CI	0.00000	0.00000	0.00000	0.00000	0.00000
28 Act 367-Gas Mains - Cathodic Protect	0.00000	0.00000	0.00000	0.00000	0.00000
PLT367CP	0.00000	0.00000	0.00000	0.00000	0.00000
29 Act 367-Gas Mains - Coated Steel	0.00000	0.00000	0.00000	0.00000	0.00000
PLT367CS	0.00000	0.00000	0.00000	0.00000	0.00000
30 Act 367-Gas Mains - Plastic	0.00000	0.00000	0.00000	0.00000	0.00000
PLT367P	0.00000	0.00000	0.00000	0.00000	0.00000
31 Act 391-Office Equipment	0.00042	0.00019	0.00045	0.00013	0.00016
PLT391OE	0.00042	0.00019	0.00045	0.00013	0.00016
32 Act 391-Office IT Equipment	0.00000	0.00000	0.00000	0.00000	0.00000
PLT391IT	0.00000	0.00000	0.00000	0.00000	0.00000
33 Act 397-Comm Equip MetScan	0.00000	0.00000	0.00000	0.00000	0.00000
PLT397M	0.00000	0.00000	0.00000	0.00000	0.00000
34 Act 397-Comm Equip ERT/ITRON	0.00000	0.00000	0.00000	0.00000	0.00000
PLT397E	0.00000	0.00000	0.00000	0.00000	0.00000
35 Act 304 Lnd Rghts-LNG & LPG Dir Csts	0.00838	0.00300	0.00847	0.00249	0.00316
PLT304L	0.00838	0.00300	0.00847	0.00249	0.00316
36 Act 305 St & Impr-LNG & LPG Dir Csts	0.00838	0.00300	0.00847	0.00249	0.00316
PLT305L	0.00838	0.00300	0.00847	0.00249	0.00316
37 Act 320 Other Eg-LNG & LPG Dir Csts	0.00838	0.00300	0.00847	0.00249	0.00316
PLT320L	0.00838	0.00300	0.00847	0.00249	0.00316
38 Total Gas Operation & Maintenance Labor	0.00050	0.00022	0.00054	0.00016	0.00019
OMLAB	0.00050	0.00022	0.00054	0.00016	0.00019
39 Inflation Adjustment Residual O&M	0.00058	0.00023	0.00060	0.00018	0.00022
OTHOMINF	0.00058	0.00023	0.00060	0.00018	0.00022

30-Jun-05 11:19 AM

PRODUCTION COMPONENTS

INTERNALLY DEVELOPED CONT-39

	ALLOC	TOTAL COMPANY INPUT
1 Acct 929-Duplicate Charges-Cr	EXP929	Page 14, Line 8
2 Acct 930-Miscellaneous General Exp	EXP930	Page 14, Line 12
3 Acct 931 Rents	EXP931	Page 14, Line 18
4 Acct 932 Maintenance of General Plant	EXP932	Page 14, Line 22
5 Total LPG Gas Operating Labor	TLABPO	Page 19, Line 5
6 Tot LPG Gas Maintenance Labor	TLABPM	Page 19, Line 9
7 Total LNG Gas Operating Labor	TLABLO	Page 19, Line 17
8 Tot LNG Gas Maintenance Labor	TLABLM	Page 19, Line 21
9 Total Transm & Distr Operating Labor	TLABDO	Page 20, Line 10
10 Total Transm & Distr Maintenance Labor	TLABDM	Page 20, Line 19
11 Total Customer Accounts Labor	TLABCA	Page 21, Line 4
12 Total Sales Expense Labor	TLABSA	Page 21, Line 9
13 Total General Plant	GENPLT	Pg 4, Ln 3 & 17
14 Claimed Sales Revenues less Gas Costs	REV/CLAIM	See Allocator Descriptions
15 Sales Expense Accounts 912 to 913	EXP9123	Pg 12, Ln 28 & 32
16 Acct 367 Mains and Acct 380 Services	PLT36780	Pg 3, Ln 11 & 14
17 Acct 381, 382 & 383 - Meters & Hse Reg	PLT3813	Pg 3, Line 15, 16 & 17
18 Acct 380,381,382 & 383 - Serv.Met & Reg	PLT3803	Pg 3, Line 14, 15, 16 & 17
19 Transm & Distr Oper Accts 851 to 879	EXP8519	Pg 11, Line 2 to 7
20 Total Customer Deposits	TOTCDEP	Page 7, Line 23
21 Acct 386 Other Property on Cust's Prem	PLT386	Page 3, Line 21
22 Total Transmission & Distribution Plant	DISTRPLT	Page 3, Line 23 & 25
23 Acct 904-Uncollectible Accts-Gas Sales	EXP904S	Pg 12, Line 9 to 19
24 Acct 904-Uncollectible Accts-Other Rev	EXP904O	Page 12, Line 22 & 23
25 Acct 367-Gas Mains - Bare Steel	PLT367BS	Page 3, Line 4
26 Acct 367-Gas Mains - Joint Clamping	PLT367JC	Page 3, Line 5
27 Acct 367-Gas Mains - Cast Iron	PLT367CI	Page 3, Line 6
28 Acct 367-Gas Mains - Cathodic Protect	PLT367CP	Page 3, Line 7
29 Acct 367-Gas Mains - Coated Steel	PLT367CS	Page 3, Line 8
30 Acct 367-Gas Mains - Plastic	PLT367P	Page 3, Line 9
31 Acct 391-Office Equipment	PLT391OE	Page 4, Line 4
32 Acct 391-Office IT Equipment	PLT391IT	Page 4, Line 5
33 Acct 397-Comm Equip Metscan	PLT397M	Page 4, Line 13
34 Acct 397-Comm Equip ERT/ITRON	PLT397E	Page 4, Line 14
35 Acct 304 Lnd Rights-LNG & LPG Dir Csts	PLT304L	Page 2, Line 6 & 7
36 Acct 305 St & Impr-LNG & LPG Dir Csts	PLT305L	Page 2, Line 10 & 11
37 Acct 320 Other Eq-LNG & LPG Dir Csts	PLT320L	Page 2, Line 15 & 16
38 Total Gas Operation & Maintenance Labor	OMLAB	Page 22, Line 15
39 Inflation Adjustment Residual O&M	OTHOMINF	See Allocator Descriptions

PRODUCTION COMPONENTS									
INTERNALY DEVELOPED CONT-40									
		ALLOC	TOTAL COMPANY	RESIDENTIAL HEATING R-3 & R-4	RESIDENTIAL NON-HEATING R-1 & R-2	OUTDOOR LIGHTING	HIGH WINTER LOW ANNUAL G-40 & T-40	HIGH WINTER MED ANNUAL G-41 & T-41	HIGH WINTER HIGH ANNUAL G-42 & T-42
1	Total Gas Supply Expense	GASCOSTS	1.00000	0.67732	0.01704	0.00001	0.06498	0.10636	0.04729
2	Acct 903-Cust Records & Coll Subtotal	EXP903T	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
3									
4									
5									
6									
7									
8									
9									
10									
11	NISource Service Charges Allocators								
12	Basis 1 - 50% Gross Plant	BASIS1P	0.02545	0.01775	0.00014	0.00000	0.00217	0.00322	0.00126
13	Basis 1 - 50% O&M less Gas & NIS 923	BASIS1OM	0.13930	0.10471	0.00621	0.00000	0.01337	0.00802	0.00230
14	Basis 10 - Number of Annual Customers	BASIS10	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
15	Basis 11 - Labor	BASIS11	0.03819	0.02684	0.00031	0.00000	0.00325	0.00463	0.00181
16	Basis 2 - Gross Plant	BASIS2	0.02545	0.01775	0.00014	0.00000	0.00217	0.00322	0.00126
17	Basis 20 - Total Direct Billed	BASIS20	0.06968	0.05289	0.00254	0.00000	0.00578	0.00453	0.00158
18	Basis 7 - 50% Deprec Plant	BASIS7P	0.02445	0.01704	0.00013	0.00000	0.00208	0.00310	0.00122
19	Basis 7 - 50% O&M less NIS 923	BASIS7OM	0.84048	0.57119	0.01503	0.00001	0.05541	0.00813	0.03895
20	Basis 9 - Labor	BASIS9	0.03819	0.02684	0.00031	0.00000	0.00325	0.00463	0.00181
21	Basis Co 12 - Oth NISource Serv Chrgs	BASCO12	0.06365	0.04760	0.00024	0.00000	0.00547	0.00447	0.00155

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

30-Jun-05 11:19 AM

PRODUCTION COMPONENTS

INTERNALLY DEVELOPED CONT-40

1	Total Gas Supply Expense	0.01207	LOW WINTER LOW ANNUAL G-50 & T-50	0.01183	LOW WINTER MED ANNUAL G-51 & T-51	LOW WINTER HIGH ANNUAL G-52 & T-52	LOW WINTER LRG HI ANNUAL G-53 & T-53
2	Acct 903-Cust Records & Coll Subtotal	0.00000		0.00000	0.03671	0.01785	0.00854
3							0.00000
4							
5							
6							
7							
8							
9							
10							
11	NISource Service Charges Allocators.						
12	Basis 1 - 50% Gross Plant	0.00030		0.00011	0.00030	0.00009	0.00011
13	Basis 1 - 50% O&M less Gas & NIS 923	0.00046		0.00208	0.00166	0.00028	0.00020
14	Basis 10 - Number of Annual Customers	0.00000		0.00000	0.00000	0.00000	0.00000
15	Basis 11 - Labor	0.00042		0.00019	0.00045	0.00013	0.00016
16	Basis 2 - Gross Plant	0.00030		0.00011	0.00030	0.00009	0.00011
17	Basis 20 - Total Direct Billed	0.00036		0.00079	0.00082	0.00021	0.00017
18	Basis 7 - 50% Deprec Plant	0.00029		0.00010	0.00029	0.00009	0.00011
19	Basis 7 - 50% O&M less NIS 923	0.00992		0.01002	0.03022	0.01459	0.00700
20	Basis 9 - Labor	0.00042		0.00019	0.00045	0.00013	0.00016
21	Basis Co 12 - Oth NISource Serv Chrgs	0.00035		0.00075	0.00082	0.00022	0.00017
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							

Bay State Gas Company
D.T.E. 05-27
Attachment AG-22-44(1)
Page 276 of 322

30-Jun-05 11:19 AM

PRODUCTION COMPONENTS

ALLOC TOTAL COMPANY INPUT

INTERNALLY DEVELOPED CONT-40

1	Total Gas Supply Expense	GASCOSTS	Page 10 , Line 7
2	Acct 903-Cust Records & Coll Subtotal	EXP903T	Pg 12 , Line 3 to 5
3			
4			
5			
6			
7			
8			
9			
10			
11	<u>NISource Service Charges Allocators</u>		
12	Basis 1 - 50% Gross Plant	BASIS1P	Page 4 , Line 18
13	Basis 1 - 50% O&M less Gas & NIS 923	BASIS1OM	See Allocator Descriptions
14	Basis 10 - Number of Annual Customers	BASIS10	Page 26 , Line 31
15	Basis 11 - Labor	BASIS11	Page 26 , Line 31
16	Basis 2 - Gross Plant	BASIS2	Page 22 , Line 21
17	Basis 20 - Total Direct Billed	BASIS20	Page 4 , Line 18
18	Basis 7 - 50% Deprec Plant	BASIS7P	Page 13 , Line 28
19	Basis 7 - 50% O&M less NIS 923	BASIS7OM	See Allocator Descriptions
20	Basis 9 - Labor	BASIS9	See Allocator Descriptions
21	Basis Co 12 - Oth NISource Serv Chrgs	BASCO12	Page 22 , Line 21
22			
23			
24			
25			
26			
27			
28			
29			
30			
31			
32			
33			
34			
35			
36			
37			
38			
39			
40			

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

30-Jun-05 11:19 AM

PRODUCTION COMPONENTS

INTERNALLY DEVELOPED CONT-41

REVENUES FROM GAS SALES

1 Revenues Firm Sales of Gas

2
3
4
5
6
7
8
9
10

ALOC	TOTAL COMPANY	RESIDENTIAL HEATING R-3 & R-4	RESIDENTIAL NON-HEATING R-1 & R-2	OUTDOOR LIGHTING	HIGH WINTER LOW ANNUAL G-40 & T-40	HIGH WINTER MED ANNUAL G-41 & T-41	HIGH WINTER HIGH ANNUAL G-42 & T-42
	1.00000	0.67571	0.02263	0.00001	0.06674	0.09792	0.04663

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

11:19 AM

30-Jun-05

PRODUCTION COMPONENTS

ALLOC

HIGH WINTER
LRG HI ANNUAL
G-43 & T-43

LOW WINTER
LOW ANNUAL
G-50 & T-50

LOW WINTER
MED ANNUAL
G-51 & T-51

LOW WINTER
HIGH ANNUAL
G-52 & T-52

LOW WINTER
LRG HI ANNUAL
G-53 & T-53

INTERNALLY DEVELOPED CONT-41

REVENUES FROM GAS SALES

Revenues Firm Sales of Gas

1 0.01024 0.01207 0.03184 0.01883 0.01738

2
3
4
5
6
7
8
9
10

30-Jun-05 11:19 AM

PRODUCTION COMPONENTS

ALLOC TOTAL COMPANY
INPUT

INTERNALLY DEVELOPED CONT-41

REVENUES FROM GAS SALES

1 Revenues Firm Sales of Gas

2
3
4
5
6
7
8
9
10

SUMMARY OF RESULTS		PRODUCTION (18)-4	DELIVERY (19)
DEVELOPMENT OF RATE BASE			
1	Gas Plant in Service	19,206,515	735,344,583
2	Less: Depreciation Reserve	7,687,909	275,704,353
3	Net Gas Plant in Service	11,518,606	459,640,230
ADD:			
4	Cash Working Capital	1,494,599	9,959,014
5	Materials & Supplies	0	3,408,069
6	Total Additions to Net Plant	1,494,599	13,367,083
DEDUCT:			
7	Deferred Taxes	2,136,918	83,385,620
8	Unamortized Pre-1971 ITC	284	10,886
9	Customer Contributions	0	11,088
10	Customer Deposits	0	3,090,784
11	Unclaimed Checks	23,498	254,812
12	Total Deductions to Net Plant	2,160,701	86,753,189
13	Total Rate Base	10,852,504	386,254,124
DEVELOPMENT OF RETURN			
14	Revenues from Sales of Gas	338,914,239	144,062,908
15	Other Operating Revenues	916,888	15,918,789
16	Total Gas Operating Revenues	339,831,128	159,981,697
LESS: OPERATING EXPENSES			
17	Operation & Maintenance Expense	337,800,216	86,286,405
18	Depreciation & Amortization Expense	790,280	34,563,572
19	Taxes Other Than Income	291,729	9,775,438
20	Interest on Customer Deposits	0	72,506
21	Income Taxes	248,082	7,061,245
22	Total Operating Expenses	339,130,307	137,759,166
23	Operating Income	700,820	22,222,531
24	Rate of Return	6.46%	5.75%
25	Index Rate of Return	1.000	1.000

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

Bay State Gas Company
D.T.E. 05-27
Attachment AG-22-44(1)
Page 283 of 322

DEVELOPMENT OF RATE BASE-2				
GAS PLANT IN SERVICE			PRODUCTION (18)-4	DELIVERY (19)
INTANGIBLE PLANT				
1	301 Organization	PLANT	112,837	4,320,082
2	Adj Organization	PLANT	(95,294)	(3,648,436)
3	Total Account 301		17,543	671,646
4	303 Misc. Intangible Plant	LABOR	1,320,439	33,253,272
5	Total Intangible Plant		1,337,982	33,924,918
PRODUCTION PLANT				
6	304 Land & Land Rights			
7	LNG Related	DEMLNG	188,664	75,571
8	LPG Related	DEMLPG	73,469	29,429
9	LNG & LPG Related	PLT304L	32,458	13,001
	Total Account 304		294,591	118,001
10	305 Structures & Improvements			
11	LNG Related	DEMLNG	799,649	320,307
12	LPG Related	DEMLPG	463,249	185,559
13	LNG & LPG Related	PLT305L	428,534	171,654
14	Total Account 305		1,691,431	677,520
15	311 L.P. Gas Equipment	DEMLPG	3,098,342	1,241,073
16	320 Other Equipment			
17	LNG Related	DEMLNG	412,449	165,211
18	LPG Related	DEMLPG	125,468	50,257
19	LNG & LPG Related	PLT320L	47,024	18,836
20	Total Account 320		584,941	234,304
	321 L.N.G. Equipment	DEMLNG	11,015,640	4,412,427
	Total Production Plant		16,684,945	6,683,325

DEVELOPMENT OF RATE BASE CONT-3			PRODUCTION (18)-4	DELIVERY (19)
GAS PLANT IN SERVICE CONT				
DISTRIBUTION PLANT				
1	364 Land & Land Rights	DISTR	0	219,041
2	365 Right of Way	DISTR	0	79,051
3	366 Structures & Improvements	DISTR	0	2,108,612
367	Gas Mains			
4	Gas Mains - Bare Steel	DISTR	0	2,554,359
5	Gas Mains - Joint Clamping	DISTR	0	20,020,721
6	Gas Mains - Cast Iron	DISTR	0	5,690,941
7	Gas Mains - Cathodic Protection	DISTR	0	8,274,626
8	Gas Mains - Coated Steel	DISTR	0	146,116,729
9	Gas Mains - Plastic	DISTR	0	126,075,826
10	Adj Gas Mains - Plastic	DISTR	0	1,053,621
11	Total Account 367		0	309,786,822
12	368 Compressor Station Equipment	DISTR	0	327,265
13	369 Meas. & Reg. Station Equipment	DISTR	0	12,355,156
14	380 Gas Services	CUST380	0	228,746,364
15	381 Gas Meters	CUST381	0	24,915,974
16	382 Meter Installations	CUST382	0	45,198,411
17	383 Gas Regulators	CUST383	0	13,612,047
386	Other Property on Cust's Premises			
18	Gas Water Heaters	CUST3860	0	14,053,382
19	Cascade Diamond Boilers	CUST3862	0	569,752
20	Conversion Burners	CUST3863	0	7,835,153
21	Total Account 386		0	22,458,288
22	387 Other Equipment	DISTR	0	1,719,559
23	Total Distribution Plant		0	661,526,587
TRANSMISSION PLANT				
24	379 Other Equipment	DISTR	0	510,252
25	Total Transmission Plant		0	510,252

DEVELOPMENT OF RATE BASE CONT-4				
GAS PLANT IN SERVICE CONT				
GENERAL PLANT				
1	389 Land & Land Rights	LABOR	6,581	165,740
2	390 Structures & Improvements	LABOR	278,948	7,024,876
3	Total General Plant		285,529	7,190,616
GENERAL PLANT (Equipment)				
4	391 Office Equipment	LABOR	226,020	5,691,965
5	Office Equipment	LABOR	210,147	5,292,227
6	Office IT Equipment		436,166	10,984,193
7	Total Account 391		90,270	2,273,324
8	392 Transportation Equipment	LABOR	1,928	48,545
9	393 Stores Equipment	LABOR	70,576	1,777,361
10	394 Tools, Shop & Garage Equipment	LABOR	15,522	390,903
11	396 Power Operated Equipment		483,774	12,183,123
12	397 Communication Equipment	LABOR	(201,141)	(5,065,440)
13	Communications Equip & Melscan	LABOR	0	644,449
14	Communications Equip Melscan	PLT381	0	2,248,171
15	Communications Equip ERT/ITRON	PLT381	282,633	10,010,304
16	Total Account 397		898,963	24,257
17	398 Miscellaneous Equipment	LABOR	898,059	25,508,886
	Total General Plant (Equipment)		19,206,515	735,344,583
18	Total Gas Plant In Service			

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

Bay State Gas Company
D.T.E. 05-27
Attachment AG-22-44(1)
Page 286 of 322

DEVELOPMENT OF RATE BASE CONT-5				
DEPRECIATION RESERVE				
INTANGIBLE PLANT RESERVE				
1	301 Organization			
2	Adj Organization	88,148		3,374,852
3	Total Account 301	(74,753)		(2,862,002)
4	303 Misc. Intangible Plant	13,395		512,850
5	Total Intangible Plant Reserve	714,852		18,002,476
		728,247		18,515,326
PRODUCTION PLANT RESERVE				
6	305 Structures & Improvements	1,106,694		443,298
7	311 L.P. Gas Equipment	2,370,206		949,410
8	320 Other Equipment	207,293		83,033
9	321 L.N.G. Equipment	2,719,573		1,089,353
10	Total Production Plant Reserve	6,403,766		2,565,094
DISTRIBUTION PLANT RESERVE				
11	365 Right of Way	0		1,573
12	366 Structures & Improvements	0		1,525,122
13	367 Gas Mains	0		79,409,611
14	368 Compressor Station Equipment	0		250,135
15	369 Meas. & Reg. Station Equipment	0		3,636,205
16	380 Gas Services	0		124,158,847
17	381 Gas Meters	0		10,092,102
18	382 Meter Installations	0		10,511,706
19	383 Gas Regulators	0		5,385,754
20	386 Other Property on Cust's Premises	0		2,962,994
21	Gas Water Heaters	0		443,949
22	Cascade Diamond Boilers	0		1,444,172
23	Conversion Burners	0		4,851,115
24	Total Account 386	0		371,382
25	387 Other Equipment	0		240,193,554
	Total Distribution Plant Reserve	0		

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

Bay State Gas Company
D.T.E. 05-27
Attachment AG-22-44(1)
Page 287 of 322

DEVELOPMENT OF RATE BASE CONT-6				
		PRODUCTION (18)-4	DELIVERY (19)	
DEPRECIATION RESERVE CONT				
TRANSMISSION PLANT RESERVE				
1	379 Other Equipment	0	223,628	
2	Total Transmission Plant Reserve	0	223,628	
GENERAL PLANT RESERVE				
3	390 Structures & Improvements	83,589	2,105,067	
4	Total General Plant Reserve	83,589	2,105,067	
GENERAL PLT RESERVE (Equipment)				
5	391 Office Equipment	292,250	7,359,878	
6	392 Transportation Equipment	49,077	1,235,923	
7	393 Stores Equipment	(75)	(1,893)	
8	394 Tools, Shop & Garage Equipment	31,115	783,581	
9	396 Power Operated Equipment	6,672	168,030	
10	397 Communication Equipment			
11	Communications Equip & Metscan	174,665	4,398,667	
12	Communications Equip Metscan Adj	(81,930)	(2,063,285)	
13	Communications Equip Metscan	0	157,481	
14	Communications Equip ERT/IITRON	0	49,882	
15	Total Account 397	92,735	2,542,745	
16	398 Miscellaneous Equipment	533	13,422	
	Tot Gen Plt Reserve (Equipment)	472,306	12,101,685	
17	Total Depreciation Reserve	7,687,909	275,704,353	
19	Net Gas Plant in Service	11,518,606	459,640,230	

DEVELOPMENT OF RATE BASE CONT-7		PRODUCTION (18)-4	DELIVERY (19)
ADDITIONS TO NET PLANT			
1	Cash Working Capital		
2	Purchased Gas	0	0
3	Other O&M	1,494,599	9,959,014
	Total Cash Working Capital	1,494,599	9,959,014
Materials & Supplies			
4	Stores Expense Undistributed		205,330
5	Truck Stock		140,504
6	Meters Stock		42,334
7	Inventory-Imprest		210,158
8	Mat Management System IC Stock		2,719,413
9	Appliances & Parts		55,590
10	Other Inventory Charges		34,740
11	Total Materials & Supplies	0	3,408,069
12	Total Additions to Net Plant	1,494,599	13,367,083
DEDUCTIONS TO NET PLANT			
Deferred Taxes			
13	Intangible Related		5,898,382
14	Production Related	232,629	716,052
15	Transmission & Distribution Related	1,787,628	73,495,972
16	General Related	138,001	3,812,626
17	Communications Equip Metscan Adj	(21,340)	(537,412)
18	Deferred Taxes	2,136,918	83,385,620
19	Unamortized Pre-1971 ITC	284	10,886
20	Customer Contributions	0	11,088
21	Customer Deposits		
22	Customer Deposits - Firm Customers	0	2,175,434
23	Customer Deposits - Marketers	0	915,350
24	Total Customer Deposits	0	3,090,784
	Unclaimed Checks	23,498	254,812
25	Total Deductions to Net Plant	2,160,701	86,753,189
26	Total Rate Base	10,852,504	386,254,124

OPERATING REVENUES-8			PRODUCTION (18)-4	DELIVERY (19)
REVENUES				
GAS OPERATING REVENUES				
SALES REVENUES				
1	Firm Sales of Gas		338,914,239	139,737,043
2	Special Contracts	DISTR	0	2,500,200
3	Special Contracts Adjustment	DISTR	0	418,748
4	Special Contracts - Other	DISTR	0	1,406,917
5	Total Sales of Gas		338,914,239	144,062,908
OTHER OPERATING REVENUES				
6	487-Late Payment Charges			
7	High Wint Low Ann Rate G40 & T40	C487R40	156,817	79,248
8	High Wint Med Ann Rate G41 & T41	C487R41	163,308	58,971
9	High Wint High Ann Rate G42 & T42	C487R42	48,347	25,329
10	High Wint Lrg Ann Rate G43 & T43	C487R43	9,214	3,342
11	Low Wint Low Ann Rate G50 & T50	C487R50	27,176	15,876
12	Low Wint Med Ann Rate G51 & T51	C487T51	47,108	16,305
13	Low Wint High Ann Rate G52 & T52	C487R52	14,802	8,954
14	Low Wint Lrg Ann Rate G53 & T53	C487R53	3,425	7,019
15	Total Account 487		470,197	215,044
16	487-Return Check Charges	CUST487	0	27,736
17	488-Rental Revenues-W/H & Conv Burn	CUST488	0	6,824,456
18	493-Rent from Gas Property	CUST882	0	7,690,936
19	Rent from Gas Property	PLANT	441	16,890
20	LNG Tank Lease Revenue	DEMLNG	446,250	178,750
21	I/C Rents	DISTRPLT	0	871,002
22	Total Account 493		446,691	1,066,642
23	903-Cust R&C, Shutoff & Turn-Off	DISTRPLT	0	93,975
24	Total Gas Operating Revenues		916,888	15,918,789
			339,831,128	159,981,697

PRODUCTION
(18)-4
DELIVERY
(19)

OPERATION & MAINTENANCE EXP-9

OPERATION & MAINTENANCE EXP

LIQUEFIED PROPANE GAS PRODUCTION

1	Operation Expense			
2	710-Supervision	33,314	13,344	
3	717-LPG Gas Expenses	340	136	
4	719-Handling Expense	14,300	5,728	
5	723-Fuel for LPG Gas Process	0	0	
6	728-Liquefied Petroleum Gas	0	0	
7	735-Miscellaneous Production Exp	152,298	61,004	
8	Total Operation Expense	200,252	80,213	
9	Maintenance			
10	740-Supervision	8,190	3,281	
11	741-Maintenance of Struct & Improv	8,584	3,439	
12	742-Maintenance of Production Equip	76,703	30,724	
13	Total Maintenance Expense	93,477	37,443	
14	Total Liquefied Propane Gas Prod Exp	293,729	117,656	

LIQUEFIED NATURAL GAS PRODUCTION

15	Operation Expense			
16	750-Supervision	370,139	148,263	
17	754-Liquefaction Expense	118,441	47,443	
18	757-Vaporization Expense	20,960	8,396	
19	758-Liquefied Natural Gas	0	0	
20	759-Handling Expense	18,781	7,523	
21	763-Fuel for Vaporization Expense	0	0	
22	768-LNG Raw Materials	0	0	
23	775-Miscellaneous Production Exp	460,361	184,402	
24	777-Lease Expense	652,952	261,547	
25	Total Operation Expense	1,641,635	657,574	
26	Maintenance			
27	780-Supervision	5,357	2,146	
28	781-Maintenance of Struct & Improv	7,897	3,163	
29	782-Maintenance of Production Equip	187,351	75,045	
30	Total Maintenance Expense	200,604	80,354	
31	Total Liquefied Natural Gas Prod Exp	1,842,239	737,928	

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

		OPERATION & MAINT EXP CONT-10			
		OTHER GAS SUPPLY EXPENSES			
		PURCHASED GAS SUPPLY			
				PRODUCTION (18)-4	DELIVERY (19)
		Gas Supply Demand Charges			
1		Base Demand Charges	DBASE	6,288,067	0
2		Remaining Demand Charges	DREMAIN	45,807,642	0
3		Total Demand Gas Costs		52,095,709	0
		Gas Supply Commodity Charges			
4		Base Commodity Charges	EBASE	80,774,205	0
5		Remaining Commodity Charges	EREMAIN	191,688,704	0
6		Total Commodity Gas Costs		272,462,909	0
7		Total Gas Supply Expense		324,558,618	0
8		Total Production Expense		326,694,586	855,584

		PRODUCTION (18)-4	DELIVERY (19)
OPERATION & MAINT EXP CONT-11			
TRANSMISSION & DISTRIBUTION EXP			
1	Operation Expense		
2	850-Operation Supervision & Engineer	0	707,572
3	851-System Control & Load Dispatch	0	0
4	852-Communication System Exp	0	143,882
5	857-Measuring & Regulating Slat Exp	0	405,485
6	874-Mains and Services Exp	0	3,764,532
7	878-Meter & House Regulator Exp	0	5,633,560
8	879-Customer Installations Exp	0	5,923,626
9	880-Other Expenses	0	580,567
10	881-Rents	0	61,576
	Total Operation Expense	0	17,220,800
Maintenance			
11	885-Supervision	0	4,267
12	886-Maintenance of Struct & Improv	0	41,025
13	887-Maintenance of Mains	0	3,789,693
14	888-Maint of Compressor Station Equip	0	0
15	889-Maint of Meas & Reg Station Equip	0	229,637
16	892-Maintenance of Services	0	1,687,229
17	893-Maint of Meters and House Regul	0	436,322
18	894-Maintenance of Other Equipment	0	403,627
19	Total Maintenance Expense	0	6,591,800
20	Total Transmission and Distribution Exp	0	23,812,600

OPERATION & MAINT EXP CONT-12				PRODUCTION (18)-4	DELIVERY (19)
CUSTOMER ACCOUNTS EXPENSES					
1	901-Supervision	TLABCA	0	0	220,334
2	902-Meter Reading Expenses	CUST902	0	0	695,743
3	903-Cust Records & Collection Exp				
4	Cust Billing & Payment Proc Exp	CUST903	0	0	2,489,985
5	Collections Expense	CUST903C	0	0	2,684,835
6	Service Customer Equipment	DISTRPLT	0	0	1,347,741
7	Call Center Expenses	EXP903T	0	0	910,424
8	Postage Adjustment	CUST903	0	0	67,947
	Total Account 903		0	0	7,500,932
9	904-Uncollectible Accounts				
10	Resid Heating Rate R-3 & R-4	C904R3	4,300,975	1,866,206	
11	Resid Non-Heating Rate R-1 & R-2	C904R1	333,285	594,698	
12	Outdoor Lighting	C904OL	0	0	
13	High Wint Low Ann Rate G40 & T40	C904R40	563,471	284,753	
14	High Wint Med Ann Rate G41 & T41	C904R41	175,700	63,445	
15	High Wint High Ann Rate G42 & T42	C904R42	20,768	10,880	
16	High Wint Lrg Ann Rate G43 & T43	C904R43	568	206	
17	Low Wint Low Ann Rate G50 & T50	C904R50	106,806	62,395	
18	Low Wint Med Ann Rate G51 & T51	C904T51	66,521	23,025	
19	Low Wint High Ann Rate G52 & T52	C904R52	7,932	4,798	
20	Low Wint Lrg Ann Rate G53 & T53	C904R53	1,114	2,283	
21	Adjustment Bad Debt Gas Sales	EXP904S	1,192,899	622,998	
22	Adj Uncollectible Prop Rate Increase	EXP904S	317,011	165,561	
23	Bad Debt Expense - Cust Service	CUST882	0	86,737	
24	Bad Debt Expense - Rental	PLT386	0	326,029	
25	Adjust Bad Debt Other Revenues	EXP904O	0	246,232	
26	Total Account 904		7,087,050	4,360,247	
	Total Customer Accounts Expenses		7,087,050	12,777,256	
SALES EXPENSES					
27	911-Supervision	TLABSA	0	0	66,710
28	912-Demonstrating & Selling Exp	CUST912	0	0	159,642
29	913-Advertising Expense				
30	Advertising Expense	CUST913	0	0	62,710
31	Advertising Guardian Care	EXP879	0	0	126,327
32	Advertising Water Heating Program	PLT386	0	0	9,334
33	Total Account 913		0	0	198,371
34	916-Miscellaneous Sales Exp	EXP9123	0	0	7,065
	Total Sales Expenses		0	0	431,788

		PRODUCTION (18)-4	DELIVERY (19)
OPERATION & MAINT EXP CONT-13			
ADMINISTRATIVE & GENERAL EXP			
1	Operation Expense		
2	920-Administrative & General Salaries	REVCLAIM	1,598,344
3	921-Office Supplies & Expenses	REVCLAIM	3,921,516
4	Office Supplies & Expenses	REVCLAIM	(342,180)
5	LDAC Unbilled Revenues Adj	REVCLAIM	3,579,336
6	Total Account 921		(3,492,088)
7	922-Administrative Exp Transferred-Cr	REVCLAIM	
8	923-Outside Services Employed		
9	Nisource Basis 1 - 50% Gross Pft	BASIS1P	2,499,540
10	N Basis 1 - 50% O&M Ex Gas Costs	BASIS1OM	2,207,549
11	Outside Services Nisource Basis 10	BASIS10	1,465,284
12	Outside Services Nisource Basis 11	BASIS11	719,521
13	Outside Services Nisource Basis 13	REVCLAIM	2,460,609
14	Out Serv Basis 13 - Facilities Mgt	PLANT	277,276
15	Out Serv Basis 13 - IT Billing	CUST903	1,599,072
16	Outside Services Nisource Basis 2	BASIS2	621,087
17	Outside Services Nisource Basis 20	BASIS20	2,684,935
18	Nisource Basis 7 - 50% Deprec Pft	BASIS7P	70,821
19	Nisource Basis 7 - 50% O&M	BASIS7OM	11,581
20	Outside Services Nisource Basis 9	BASIS9	33,206
21	Outside Services Nisource Co 12	BASCO12	1,753,458
22	Outside Serv Nisource Direct Billed		
23	BSG Communications	REVCLAIM	203,872
24	Regulatory External Affairs	REVCLAIM	302,136
25	Printing & Inserting	EXP903	204,082
26	Finance & Acct'g & HR	REVCLAIM	300,332
27	Regulatory	REVCLAIM	340,213
28	Legal Energy Distr East	REVCLAIM	511,102
29	Fleet Management	LABOR	262,069
30	Nisource Retail Services	EXP879	437,393
31	Oth Outside Service - Direct Billed	REVCLAIM	1,647,928
32	Total Out Serv - Direct Billed		4,209,427
33	Outside Services Employed BSG	REVCLAIM	1,236,095
34	NIS Gas Dispatching & Control	DISTR	672,581
35	NIS Gas Acq & Dispat Costs - Sales	GASCOSTS	0
36	NIS Gas Acq & Dispat Costs - Trans	DISTR	159,283
37	Nisource Payroll & Benefits Adj	REVCLAIM	692,954
38	Nisource PBOP & Pension	PENSION	603,831
39	Nisource Charitable Contr Adj	(738)	(7,997)
40	DSM Implementation Expense Adj	REVCLAIM	(2,214,080)
41	Customer Choice Recoveries Adj	REVCLAIM	60,274
42	Total Account 923		2,871,382
43	924-Property Insurance	PLANT	0
44	925-Injuries & Damages		
45	Injuries & Damages	REVCLAIM	2,498,055
46	Corporate Insurance Premiums Adj	REVCLAIM	86,976
47	Self Insurance Adjustment	REVCLAIM	73,265
48	Total Account 925		2,658,296

OPERATION & MAINT EXP CONT-14			PRODUCTION (18)/4	DELIVERY (19)
ADMIN & GENERAL EXP CONT				
1	926-Employees Pensions & Benefits	LABOR	345,106	8,690,973
2	Medical & Dental Benefits Adj	LABOR	28,302	712,743
3	Pension & PBOP Expense	PENSION	0	5,026,451
4	Total Account 926		373,408	14,430,167
5	928-Regulatory Commission Expenses	REVCLAIM	30,332	328,911
6	Rate Case Expense Adj	REVCLAIM	28,006	303,694
7	Total Account 928		58,338	632,605
8	929-Duplicate Charges-Cr	REVCLAIM	0	0
9	930-Miscellaneous General Exp	REVCLAIM	59,160	641,517
10	Miscellaneous General Exp	REVCLAIM	(12,434)	(134,837)
11	Charitable Contributions Adj	REVCLAIM	26,174	283,826
12	Research & Develop GRI/GTI Adj	REVCLAIM	72,900	790,506
	Total Account 930			
13	931 Rents	REVCLAIM	93,096	1,009,517
14	Rents - General & Admin	PLT397M	0	4,817,413
15	Miscan Lease Expense	PLT397M	0	(2,919,051)
16	Miscan Lease Expense Adj	PLT386	0	185,481
17	Water Heater Lease Expense	PLT397E	0	310,104
18	Iron Lease Payment Adj		93,096	3,403,464
19	Total Account 931		3,869,712	45,416,636
	Total Operation Expense			
20	Maintenance			
21	932 Maintenance of General Plant	GENPLT	71,856	1,985,190
22	Maintenance of General Plant	GENPLT	(42,298)	(1,168,571)
23	ERC Remediation Adj		29,558	816,619
	Total Account 932		3,899,270	46,233,255
24	Total Gas O&M Exp Before Other Adj		337,680,905	84,110,483
ADJUSTMENTS TO O&M EXPENSES				
25	Total Gas Operation & Maintenance Exp		337,680,905	84,110,483
26	Payroll - Union Adjustment	OMLAB	53,047	1,120,371
27	Payroll - Non-Union Adjustment	OMLAB	20,065	423,775
28	Incentive Compensation Adjustment	OMLAB	(5,625)	(118,797)
29	Gain on Sale of Property Adjustment	PLANT	(10,390)	(397,807)
30	Farm Sales Adjustment	REVCLAIM	1,294	14,026
31	Inflation Adjustment	OTHOMINF	60,921	1,134,353
32	Total Adjusted Gas Oper & Maint Exp		337,800,216	86,286,405

PRODUCTION
(18)-4
DELIVERY
(19)

DEPRECIATION & AMORT EXPENSE-15

DEPRECIATION & AMORTIZATION EXP

INTANGIBLE PLANT AMORTIZATION

1	301 Organization	PLT301	2,864	109,644
2	Adj Organization	PLT301	(2,544)	(97,408)
3	Total Account 301		320	12,236
4	303 Misc. Intangible Plant	PLT303	569,987	14,354,255
5	Misc. Intangible Plant	PLT303	(421,153)	(10,606,099)
6	Adj NipSCO Amortization		148,834	3,748,156
7	Total Account 303		149,153	3,760,392
	Total Intangible Plant Amortization			

PRODUCTION PLANT DEPRECIATION

8	305 Structures & Improvements	PLT305	51,758	20,732
9	311 L.P. Gas Equipment	PLT311	57,319	22,960
10	320 Other Equipment	PLT320	43,637	17,479
11	321 L.N.G. Equipment	PLT321	397,664	159,289
12	Total Production Plant Depreciation		550,378	220,460

DISTRIBUTION PLANT DEPRECIATION

13	365 Right of Way	PLT365	0	1,723
14	366 Structures & Improvements	PLT366	0	65,367
	367 Gas Mains			
15	Gas Mains - Bare Steel	PLT367BS	0	121,077
16	Gas Mains - Joint Clamping	PLT367JC	0	1,285,330
17	Gas Mains - Cast Iron	PLT367CI	0	137,152
18	Gas Mains - Cathodic Protection	PLT367CP	0	624,734
19	Gas Mains - Coated Steel	PLT367CS	0	3,696,753
20	Gas Mains - Plastic	PLT367P	0	2,735,845
21	Adj Gas Mains - Plastic	PLT367P	0	22,864
22	Total Account 367		0	8,623,755
23	368 Compressor Station Equipment	PLT368	0	16,821
24	369 Meas. & Reg. Station Equipment	PLT369	0	334,825
25	380 Gas Services	PLT380	0	11,620,315
26	381 Gas Meters	PLT381	0	986,673
27	382 Meter Installations	PLT382	0	1,509,627
28	383 Gas Regulators	PLT383	0	552,649
	386 Other Property on Cust's Premises			
29	Gas Water Heaters	PLT386O	0	992,169
30	Cascade Diamond Boilers	PLT3862	0	40,224
31	Conversion Burners	PLT3863	0	325,942
32	Total Account 386		0	1,358,335
33	387 Other Equipment	PLT387	0	256,386
34	Total Distribution Plant Depreciation		0	25,326,476

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

Bay State Gas Company
D.T.E. 05-27
Attachment AG-22-44(1)
Page 297 of 322

DEPREC & AMORT EXP CONT-16			PRODUCTION (18)-4	DELIVERY (19)
TRANSMISSION PLANT DEPRECIATION				
1	379 Other Equipment	PLT379	0	13,471
2	Total Transmission Plant Depreciation		0	13,471
GENERAL PLANT DEPRECIATION				
3	390 Structures & Improvements	PLT390	5,858	147,522
4	Total General Plant Depreciation		5,858	147,522
GENERAL PLT DEPRECIATION (Equip)				
5	391 Office Equipment	PLT391OE	11,759	296,122
6	Office Equipment	PLT391IT	38,452	968,345
7	Total Account 391		50,210	1,264,468
8	392 Transportation Equipment	PLT392	12,520	315,310
9	393 Stores Equipment	PLT393	220	5,539
10	394 Tools, Shop & Garage Equipment	PLT394	3,112	78,382
11	396 Power Operated Equipment	PLT396	1,895	47,729
12	397 Communication Equipment	PLT397O	19,219	484,002
13	Communications Equipment Other	PLT397E	0	160,519
14	Communications Equip ERT/ITRON	PLT397M	0	159,243
15	Communications Equip Metscan		19,219	803,764
16	Total Account 397		48	1,213
17	398 Miscellaneous Equipment	PLT398	87,225	2,516,404
18	Tot Gen Plt Depreciation (Equip)		(2,335)	(64,502)
19	Adj Depreciation Exp Alloc Mgt. Fee	GENPLT	0	2,643,350
20	Adj Amortization of Metscan Devices	PLT397M	790,280	34,563,572
	Total Depreciation & Amortization Exp			

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

Bay State Gas Company
D.T.E. 05-27
Attachment AG-22-44(1)
Page 298 of 322

STATE & FED TAXES & OTH EXP-17				PRODUCTION (18)+4	DELIVERY (19)
TAXES OTHER THAN INCOME					
Payroll Taxes					
1	Payroll Taxes	LABOR		94,786	2,387,037
2	Payroll Tax Adjustment	LABOR		3,480	87,634
3	Total Payroll Taxes			98,266	2,474,671
Plant Related Taxes					
Property Taxes					
4	Property Taxes	PLANT		180,006	6,891,738
5	Property Tax Adjustment	PLANT		7,909	302,801
6	Total Property Taxes			187,915	7,194,539
Other Taxes					
7	Other Taxes	PLANT		1,678	64,253
8	Other Tax Adjustment	PLANT		0	0
9	Total Other Taxes			1,678	64,253
10	Total Plant Related Taxes			189,593	7,258,792
Revenue Related Taxes					
11	Other State Taxes	REVCLAIM		3,871	41,974
12	Total Revenue Related Taxes			3,871	41,974
13	Total Taxes Other Than Income			291,729	9,775,438
FEDERAL & STATE INCOME TAXES					
14	State Tax @ 6.50%			41,574	1,187,910
15	Federal Tax @ 35.00%			209,311	5,980,668
16	Amortization of ITC			(9,513)	(364,227)
17	Deferred Tax Flowback			6,710	256,894
18	Total Income Tax Expense			248,082	7,061,245
19	INTEREST ON CUSTOMER DEPOSITS	TOTCDEP		0	72,506
20	Total Expenses			339,130,307	137,759,166
21	Net Operating Income			700,820	22,222,531

		PRODUCTION (18)-4	DELIVERY (19)
DEVELOPMENT OF INCOME TAXES-18			
FEDERAL & STATE TAX CALCULATION			
1	Operating Revenues	339,831,128	159,981,697
Operating Expenses			
2	Operation & Maintenance Expense	337,800,216	86,286,405
3	Depreciation & Amortization Expense	790,280	34,563,572
4	Taxes Other Than Income	291,729	9,775,438
Interest Expense			
5	Interest on Customer Deposits	0	72,506
6	Interest Expense	309,296	11,008,243
7	Book Taxable Income	639,606	18,275,534
Adjustments to Taxable Income			
10	Deductions	0	0
PLANT			
11	Taxable Basis State Franchise Tax	639,606	18,275,534
Less:			
12	State Tax @ 6.50%	41,574	1,187,910
13	Federal Taxable Basis	598,031	17,087,624
14	Federal Income Tax @ 35.00%	209,311	5,980,668
15	Federal Income Tax Liability	209,311	5,980,668
16	Amortization of ITC	(9,513)	(364,227)
PLANT			
17	Deferred Tax Flowback	6,710	256,894
18	Total Income Tax Expense	248,082	7,061,245
19	Net Income After Tax	700,820	22,222,531
Effective State Tax Rate			
Federal Tax Rate - Current		6.50%	6.50%
1 - Incremental Tax Rate		35.00%	35.00%
Incremental Tax Rate		0.60775	0.60775
Effective Incremental Federal Rate		0.39225	0.39225
Factor for Taxable Basis		0.32725	0.32725
Interest Expense Percentage		1.64541	1.64541
Purchased Gas Working Capital %		2.85%	2.85%
Other O&M Working Capital %		11.564%	11.564%
		0.00%	0.00%

		PRODUCTION (18)-4	DELIVERY (19)
DEVELOPMENT OF LABOR ALLOC-19			
DEVELOPMENT OF LABOR ALLOCATOR			
LIQUEFIED PROPANE PROD LABOR			
1	Operation Labor		
2	710-Supervision	29,153	11,677
3	717-LPG Gas Expenses	245	98
4	719-Handling Expense	11,060	4,430
5	735-Miscellaneous Production Exp	86,849	34,788
6	Total Operation Labor	127,307	50,994
7	Maintenance Labor		
8	740-Supervision	6,968	2,791
9	741-Maintenance of Struct & Improv	3,124	1,251
10	742-Maintenance of Production Equip	31,025	12,427
11	Total Maintenance Labor	41,117	16,470
12	Total Liquefied Propane Prod Labor	168,424	67,464
LIQUEFIED NATURAL GAS LABOR			
13	Operation Labor		
14	750-Supervision	323,903	129,742
15	754-Liquefaction Expense	92,906	37,215
16	757-Vaporization Expense	16,441	6,586
17	759-Handling Expense	14,526	5,818
18	775-Miscellaneous Production Exp	262,525	195,157
19	777-Lease Expense	0	0
20	Total Operation Labor	710,302	284,519
21	Maintenance Labor		
22	780-Supervision	4,558	1,826
23	781-Maintenance of Struct & Improv	2,874	1,151
24	782-Maintenance of Production Equip	75,780	30,354
25	Total Maintenance Labor	83,211	33,331
26	Total Liquefied Natural Gas Prod Labor	793,513	317,850
27	Total Production Labor	961,937	385,314

DEVEL OF LABOR ALLOC CONT-20			PRODUCTION (18)-4	DELIVERY (19)
TRANSMISSION & DISTRIB LABOR				
Operation Labor				
1	850-Operation Supervision & Engineer	LABDO	0	516,364
2	851-System Control & Load Dispatch	EXP851	0	0
3	852-Communication System Exp	EXP852	0	0
4	857-Measuring & Regulating Stat Exp	EXP857	0	247,504
5	874-Mains and Services Exp	EXP874	0	1,872,344
6	878-Meter & House Regulator Exp	EXP878	0	3,903,793
7	879-Customer Installations Exp	EXP879	0	3,699,668
8	880-Other Expenses	EXP880	0	367,296
9	881-Rents	EXP881	0	0
10	Total Operation Labor		0	10,606,968
Maintenance Labor				
11	885-Supervision	LABDM	0	4,263
12	886-Maintenance of Struct & Improv	EXP886	0	21,780
13	887-Maintenance of Mains	EXP887	0	2,193,154
14	888-Maint of Compressor Station Equip	EXP888	0	0
15	889-Maint of Meas & Reg Station Equip	EXP889	0	179,726
16	892-Maintenance of Services	EXP892	0	1,261,488
17	893-Maint of Meters and House Regul	EXP893	0	312,751
18	894-Maintenance of Other Equipment	EXP894	0	256,706
19	Total Maintenance Labor		0	4,229,868
20	Total Transmission and Distribution Labor		0	14,836,836

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

DEVELOPMENT OF LABOR ALLOCATION CONT-21			PRODUCTION (18)-4	DELIVERY (19)
CUSTOMER ACCOUNTS LABOR				
1	901-Supervision	LABCA	0	221,538
2	902-Meter Reading Expenses	EXP902	0	647,138
3	903-Cust Records & Collection Exp	EXP903	0	4,970,313
4	Total Customer Accounts Labor		0	5,838,988
SALES EXPENSES LABOR				
5	911-Supervision	LABSA	0	80,141
6	912-Demonstrating & Selling Exp	EXP912	0	117,959
7	913-Advertising Exp	EXP913	0	0
8	916-Miscellaneous Sales Exp	EXP916	0	7,065
9	Total Sales Expenses Labor		0	205,166

PRODUCTION
(18)-4

DELIVERY
(19)

DEVELOPMENT OF LABOR ALLOC CONT-22

ADMINISTRATIVE & GENERAL LABOR

1	920-Administrative & General Salaries	EXP920	87,528	949,139
2	921-Office Supplies & Expenses	EXP921	480	5,207
3	922-Administrative Exp Transferred-Cr	EXP922	0	0
4	923-Outside Services Employed	EXP923	28	212
5	924-Property Insurance	EXP924	0	0
6	925-Injuries & Damages	EXP925	2,014	21,840
7	926-Employees Pensions & Benefits	EXP926	337	13,038
8	928-Regulatory Commission Expenses	EXP928	0	0
9	929-Duplicate Charges-Cr	EXP929	0	0
10	930-Miscellaneous General Exp	EXP930	9,511	103,138
11	931 Rents	EXP931	0	0
12	Total Operation Labor		99,899	1,092,574
	Maintenance Labor			
13	932 Maintenance of General Plant	EXP932	10,397	287,232
14	Total Administrative & General Labor		110,296	1,379,806
15	Total Gas Operation & Maintenance Labor		1,072,233	22,646,110

CONSTRUCTION LABOR CAPITALIZED

16	Distribution Related			
17	Distribution/Transmission	DISTR	0	3,541,199
18	Metscan	PLT397M	0	8,430
19	ERT	PLT397E	0	794,442
20	Conversion Burners	CUST3863	0	12,391
	Total Capitalized Labor		0	4,356,461
21	Sum of Allocated Labor Expense		1,072,233	27,002,571

REVENUE REQUIREMENTS-23			
PRESENT RATES		PRODUCTION (18)-4	DELIVERY (19)
1	Rate Base	10,852,504	386,254,124
2	Net Operating Income (Present Rates)	700,820	22,222,531
3	Rate of Return (Present Rates)	6.46%	5.75%
4	Relative Rate of Return	1.000	1.000
5	Sales Revenues (Present Rates)	338,914,239	139,737,043
6	Annual Booked Therm Sales	365,949,048	365,949,048
7	Sale Revenue \$/Therm (Present Rates)	\$0.9261	\$0.3818
CLAIMED RATE OF RETURN			
8	Claimed Rate of Return	9.05%	9.05%
9	Return Req for Claimed Rate of Return	982,152	34,955,998
10	Sales Revenue Required Claimed ROR	339,377,146	160,688,861
11	Revenue Deficiency Sales Revenues	462,907	20,951,818
12	Percent Increase Required	0.14%	14.99%
13	Annual Booked Therm Sales	365,949,048	365,949,048
14	Sales Revenue Required \$/Therm	\$0.9274	\$0.4391
15	Revenue Deficiency \$/Therm	\$0.0013	\$0.0573

RATIO TABLE-33

CAPACITY RELATED

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
PRODUCTION ALLOCATORS																	
Design Day Remaining Demands - Sales	1.00000	1.00000	1.00000	1.00000	1.00000	28.6%											
LPG Production Allocator - Prod Function	1.00000	1.00000	1.00000	1.00000	1.00000	28.6%											
LNG Production Allocator - Prod Function	1.00000	1.00000	1.00000	1.00000	1.00000	28.6%											
LPG & LNG Prod Alloc - Distr Function	1.00000	1.00000	1.00000	1.00000	1.00000	28.6%											
LPG & LNG Distr Pressure Support %																	
PROD-PRESSURE SUPP ALLOC																	
LPG Prod & Pressure Support Alloc	0.71400	0.71400	0.71400	0.71400	0.71400	0.71400											
LNG Prod & Pressure Support Alloc	0.71400	0.71400	0.71400	0.71400	0.71400	0.71400											
GAS COST ALLOCATORS																	
Base Demand Gas Costs	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000											
Remaining Demand Gas Costs	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000											

DISTRIBUTION ALLOCATORS

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
DISTRIBUTION ALLOCATORS																	
Distribution Allocator	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000											
Pension & PBOP Expense Allocator	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000											

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

DELIVERY
(19)PRODUCTION
(18)-4

RATIO TABLE CONT-34

COMMODITY RELATED

EBASE
EREMAIN

1 Base Commodity Gas Costs
2 Remaining Commodity Gas Costs
3
4
5
6
7 Annual Therm Firm Sales Sendout
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35

1.00000
1.00000

1.00000

0.00000
0.00000

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

Bay State Gas Company
D.T.E. 05-27
Attachment AG-22-44(1)
Page 307 of 322

RATIO TABLE CONT-35			
CUSTOMER RELATED		PRODUCTION (18)-4	DELIVERY (19)
1	Acct 380 Gas Services	CUST380	1.00000
2	Acct 381 Gas Meters	CUST381	1.00000
3	Acct 382 Meter Installations	CUST382	1.00000
4	Acct 383 Gas Regulators	CUST383	1.00000
5	Customer Deposits	CUSTDEP	1.00000
6	Transportation Customers	CUSTTR	1.00000
7	Acct 386.0 Gas Water Heaters	CUST3860	1.00000
8	Acct 386.2 Cascade Diamond Boilers	CUST3862	1.00000
9	Acct 386.3 Conversion Burners	CUST3863	1.00000
10	Acct 487-Return Check Charges	CUST487	1.00000
11	Acct 488-Rental Rev-W/H & Conv Burn	CUST488	1.00000
12	Acct 882-Revenue Guardian Care & C/S	CUST882	1.00000
13	Acct 902 Meter Reading Expense	CUST902	1.00000
14	Acct 903-Cust Records & Collection Exp	CUST903	1.00000
15	Acct 912-Demonstrating & Selling Exp	CUST912	1.00000
16	Acct 913-Advertising Expense	CUST913	1.00000
17	Acct 879-Customer Installations Exp	CUST879	1.00000
18	Acct 903 Collections Expense	CUST903C	1.00000
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			
31			
32			
33			
34			
35			
36			
37			

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

Bay State Gas Company
D.T.E. 05-27
Attachment AG-22-44(1)
Page 308 of 322

RATIO TABLE CONT-36			
INTERNALLY DEVELOPED			
UNCOLLECTIBLE ACCOUNTS		PRODUCTION (18)-4	DELIVERY (19)
1	Residential Heating Rate R-3 & R-4	C904R3	0.30260
2	Residential Non-Heating Rate R-1 & R-2	C904R1	0.64085
3	Outdoor Lighting	C904OL	0.12741
4	High Winter Low Annual Rate G40 & T40	C904R40	0.33571
5	High Winter Med Annual Rate G41 & T41	C904R41	0.26530
6	High Winter High Annual Rate G42 & T42	C904R42	0.34378
7	High Winter Large Annual Rate G43 & T43	C904R43	0.26615
8	Low Winter Low Annual Rate G50 & T50	C904R50	0.36876
9	Low Winter Med Annual Rate G51 & T51	C904T51	0.25713
10	Low Winter High Annual Rate G52 & T52	C904R52	0.37692
11	Low Winter Large Annual Rate G53 & T53	C904R53	0.67205
12			
13	LATE PAYMENT CHARGES		
14			
15	High Winter Low Annual Rate G40 & T40	C487R40	0.33571
16	High Winter Med Annual Rate G41 & T41	C487R41	0.26530
17	High Winter High Annual Rate G42 & T42	C487R42	0.34378
18	High Winter Large Annual Rate G43 & T43	C487R43	0.26615
19	Low Winter Low Annual Rate G50 & T50	C487R50	0.36876
20	Low Winter Med Annual Rate G51 & T51	C487T51	0.25713
21	Low Winter High Annual Rate G52 & T52	C487R52	0.37692
22	Low Winter Large Annual Rate G53 & T53	C487R53	0.67205
23			
24			
25			
26			
27			
28			
29			
30			
31			
32			
33			

INTERNALLY DEVELOPED-37		PRODUCTION (18)-4	DELIVERY (19)
1	Total Gas Plant In Service	PLANT	0.97455
2	Sum of Allocated Labor Expense	LABOR	0.96181
3	Acct 301 Organization	PLT301	0.97455
4	Acct 303 Misc. Intangible Plant	PLT303	0.96181
5	Acct 305 Structures & Improvements	PLT305	0.28600
6	Acct 311 L.P. Gas Equipment	PLT311	0.28600
7	Acct 320 Other Equipment	PLT320	0.28600
8	Acct 321 L.N.G. Equipment	PLT321	0.28600
9	Acct 365 Right of Way	PLT365	1.00000
10	Acct 366 Structures & Improvements	PLT366	1.00000
11	Acct 367 Gas Mains	PLT367	1.00000
12	Acct 368 Compressor Station Equipment	PLT368	1.00000
13	Acct 369 Meas. & Reg. Station Equip	PLT369	1.00000
14	Acct 380 Gas Services	PLT380	1.00000
15	Acct 381 Gas Meters	PLT381	1.00000
16	Acct 382 Meter Installations	PLT382	1.00000
17	Acct 383 Gas Regulators	PLT383	1.00000
18	Acct 386 Gas Water Heaters	PLT3860	1.00000
19	Acct 386 Cascade Diamond Boilers	PLT3862	1.00000
20	Acct 386 Conversion Burners	PLT3863	1.00000
21	Acct 387 Other Equipment	PLT387	1.00000
22	Acct 379 Other Equipment	PLT379	1.00000
23	Acct 390 Structures & Improvements	PLT390	0.96181
24	Acct 391 Office Equipment	PLT391	0.96181
25	Acct 392 Transportation Equipment	PLT392	0.96181
26	Acct 393 Stores Equipment	PLT393	0.96181
27	Acct 394 Tools, Shop & Garage Equip	PLT394	0.96181
28	Acct 396 Power Operated Equipment	PLT396	0.96181
29	Acct 397 Communication Equip-Other	PLT397O	0.96181
30	Acct 398 Miscellaneous Equipment	PLT398	0.96181
31	LPG Gas Prod Labor Accts 717 to 735	LABPO	0.28600
32	Acct 717-LPG Gas Expenses	EXP717	0.28600
33	Acct 719-Handling Expense	EXP719	0.28600
34	Acct 735-Miscellaneous Production Exp	EXP735	0.28600
35	LPG Gas Prod Labor Accts 741 to 742	LABPM	0.28600
36	Acct 741-Maintenance of Struct & Improv	EXP741	0.28600
37	Acct 742-Maintenance of Production Eq	EXP742	0.28600
38	LNG Gas Prod Labor Accts 754 to 777	LABLO	0.28600
39	Acct 754-Liquefaction Expense	EXP754	0.28600
40	Acct 757-Vaporization Expense	EXP757	0.28600

INTERNALLY DEVELOPED CONT-38		PRODUCTION (18)-4	DELIVERY (19)
1	Acct 759-Handling Expense	EXP759	0.28600
2	Acct 775-Miscellaneous Production Exp	EXP775	0.28600
3	Acct 777-Lease Expense	EXP777	0.28600
4	LNG Gas Prod Labor Accts 781 to 782	LABLM	0.28600
5	Acct 781-Maintenance of Struct & Improv	EXP781	0.28600
6	Acct 782-Maintenance of Production Eq	EXP782	0.28600
7	Total Intangible Plant	INTPLT	0.96206
8	Total Production Plant	PRODPLT	0.28600
9	Trans & Distr Op Labor Accts 851 to 881	LABDO	1.00000
10	Acct 851-Sys Control & Load Dispatch	EXP851	0.00000
11	Acct 852-Communication System Exp	EXP852	1.00000
12	Acct 857-Measuring & Regul Stat Exp	EXP857	1.00000
13	Acct 874-Mains and Services Exp	EXP874	1.00000
14	Acct 878-Meter & House Regulator Exp	EXP878	1.00000
15	Acct 879-Customer Installations Exp	EXP879	1.00000
16	Acct 880-Other Expenses	EXP880	1.00000
17	Acct 881-Rents	EXP881	1.00000
18	Trans & Distr Maint Lab Accts 851 to 881	LABDM	1.00000
19	Acct 886-Maintenance of Struct & Improv	EXP886	1.00000
20	Acct 887-Maintenance of Mains	EXP887	1.00000
21	Acct 888-Maint of Compressor Station Eq	EXP888	0.00000
22	Acct 889-Maint of Meas & Reg Station Eq	EXP889	1.00000
23	Acct 892-Maintenance of Services	EXP892	1.00000
24	Acct 893-Mnt of Meters and House Regul	EXP893	1.00000
25	Acct 894-Maintenance of Other Equip	EXP894	1.00000
26	Customer Accts Labor Accts 902 to 903	LABCA	1.00000
27	Acct 902-Meter Reading Expenses	EXP902	1.00000
28	Acct 903-Cust Records & Collection Exp	EXP903	1.00000
29	Sales Expenses Labor Accts 912 to 916	LABSA	1.00000
30	Acct 912-Demonstrating & Selling Exp	EXP912	1.00000
31	Acct 913-Advertising Exp	EXP913	1.00000
32	Acct 916-Miscellaneous Sales Exp	EXP916	1.00000
33	Acct 920-Administrative & General Sal	EXP920	0.91557
34	Acct 921-Office Supplies & Expenses	EXP921	0.91557
35	Acct 922-Administrative Exp Transf-Cr	EXP922	0.91557
36	Acct 923-Outside Services Employed	EXP923	0.88369
37	Acct 924-Property Insurance	EXP924	0.00000
38	Acct 925-Injuries & Damages	EXP925	0.91557
39	Acct 926-Employees Pensions & Benef	EXP926	0.97478
40	Acct 928-Regulatory Commission Exp	EXP928	0.91557

INTERNALLY DEVELOPED CONT-39		PRODUCTION (18)-4	DELIVERY (19)
1	Acct 929-Duplicate Charges-Cr	EXP929	0.00000
2	Acct 930-Miscellaneous General Exp	EXP930	0.08443
3	Acct 931 Rents	EXP931	0.97337
4	Acct 932 Maintenance of General Plant	EXP932	0.96507
5	Total LPG Gas Operating Labor	TLABPO	0.28600
6	Tot LPG Gas Maintenance Labor	TLABPM	0.28600
7	Total LNG Gas Operating Labor	TLABLO	0.28600
8	Tot LNG Gas Maintenance Labor	TLABLM	0.28600
9	Total Transm & Distr Operating Labor	TLABDO	1.00000
10	Total Transm & Distr Maintenance Labor	TLABDM	1.00000
11	Total Customer Accounts Labor	TLABCA	1.00000
12	Total Sales Expense Labor	TLABSA	1.00000
13	Total General Plant	GENPLT	0.96507
14	Claimed Sales Revenues less Gas Costs	REVCLAIM	0.91557
15	Sales Expense Accounts 912 to 913	EXP9123	1.00000
16	Acct 367 Mains and Acct 380 Services	PLT36780	1.00000
17	Acct 381, 382 & 383 - Meters & Hse Reg	PLT3813	1.00000
18	Acct 380,381,382 & 383 - Serv.Met & Reg	PLT3803	1.00000
19	Transm & Distr Oper Accts 851 to 879	EXP8519	1.00000
20	Total Customer Deposits	TOTCDEP	1.00000
21	Acct 386 Other Property on Cust's Prem	PLT386	1.00000
22	Total Transmission & Distribution Plant	DISTRPLT	1.00000
23	Acct 904-Uncollectible Accts-Gas Sales	EXP904S	0.34308
24	Acct 904-Uncollectible Accts-Other Rev	EXP904O	1.00000
25	Acct 367-Gas Mains - Bare Steel	PLT367BS	1.00000
26	Acct 367-Gas Mains - Joint Clamping	PLT367JC	1.00000
27	Acct 367-Gas Mains - Cast Iron	PLT367CI	1.00000
28	Acct 367-Gas Mains - Cathodic Protect	PLT367CP	1.00000
29	Acct 367-Gas Mains - Coated Steel	PLT367CS	1.00000
30	Acct 367-Gas Mains - Plastic	PLT367P	1.00000
31	Acct 391-Office Equipment	PLT391OE	0.96181
32	Acct 391-Office IT Equipment	PLT391IT	0.96181
33	Acct 397-Comm Equip Metscan	PLT397M	1.00000
34	Acct 397-Comm Equip ERT/ITRON	PLT397E	1.00000
35	Acct 304 Lnd Rghts-LNG & LPG Dir Csts	PLT304L	0.28600
36	Acct 305 St & Impr-LNG & LPG Dir Csts	PLT305L	0.28600
37	Acct 320 Other Eq-LNG & LPG Dir Csts	PLT320L	0.28600
38	Total Gas Operation & Maintenance Labor	OMLAB	0.95479
39	Inflation Adjustment Residual O&M	OTHOMINF	0.04521
40			0.94903

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

Bay State Gas Company
D.T.E. 05-27
Attachment AG-22-44(1)
Page 312 of 322

INTERNALLY DEVELOPED CONT-40				PRODUCTION (18)-4	DELIVERY (19)
		GAS COSTS EXP903T			
1	Total Gas Supply Expense			1.00000	0.00000
2	Acct 903-Cust Records & Coll Subtotal			0.00000	1.00000
3					
4					
5					
6					
7					
8					
9					
10					
11	<u>NISource Service Charges Allocators</u>				
12	Basis 1 - 50% Gross Plant	BASIS1P		0.02545	0.97455
13	Basis 1 - 50% O&M less Gas & NIS 923	BASIS1OM		0.13930	0.86070
14	Basis 10 - Number of Annual Customers	BASIS10		0.00000	1.00000
15	Basis 11 - Labor	BASIS11		0.03819	0.96181
16	Basis 2 - Gross Plant	BASIS2		0.02545	0.97455
17	Basis 20 - Total Direct Billed	BASIS20		0.06968	0.93032
18	Basis 7 - 50% Deprec Plant	BASIS7P		0.02445	0.97555
19	Basis 7 - 50% O&M less NIS 923	BASIS7OM		0.84048	0.15952
20	Basis 9 - Labor	BASIS9		0.03819	0.96181
21	Basis Co 12 - Oth NISource Serv Chrgs	BASCO12		0.06365	0.93635
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

	PRODUCTION (18)-4	DELIVERY (19)
1 Revenues Firm Sales of Gas	1.00000	1.00000

INTERNALLY DEVELOPED CONT-41

REVENUES FROM GAS SALES

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

Attachment AG-22-44

PRESENT RATE OF RETURN SUMMARY SCHEDULE - COMPONENT FORMAT									
	TOTAL COMPANY	RESIDENTIAL HEATING R-3 & R-4	RESIDENTIAL NON-HEATING R-1 & R-2	OUTDOOR LIGHTING	HIGH WINTER LOW ANNUAL G-40 & T-40	HIGH WINTER MED ANNUAL G-41 & T-41	HIGH WINTER HIGH ANNUAL G-42 & T-42		
RATE OF RETURN	5.77%	7.00%	-1.00%	11.24%	5.22%	6.82%	5.50%		
REVENUES REQUIRED									
1 CAPACITY COMPONENTS	118,939,994	74,716,310	965,727	457	8,134,733	14,013,434	7,772,460		
2 DEMAND PRODUCTION	58,570,082	40,528,568	594,662	170	4,831,428	8,658,235	2,738,493		
3 PRODUCTION LPG	781,123	551,773	2,864	0	65,450	97,757	37,290		
4 PRODUCTION LNG	4,190,701	2,981,803	9,267	0	343,748	526,308	196,398		
5 PROD DEMAND GAS COSTS	53,568,258	36,904,992	592,511	170	4,222,231	6,234,170	2,504,805		
6 DEMAND DISTRIBUTION									
7 PRESSURE SUPPORT	1,970,889	1,074,844	9,711	9	115,786	240,691	179,517		
8 DISTRIBUTION OTHER	58,309,023	33,112,898	361,353	278	3,367,518	6,914,507	4,854,451		
9 COMMODITY COMPONENTS	280,344,157	190,320,285	5,451,845	2,179	17,627,770	28,550,261	12,905,030		
10 GAS COSTS	280,344,157	190,320,285	5,451,845	2,179	17,627,770	28,550,261	12,905,030		
11 CUSTOMER COMPONENTS	79,367,131	58,393,161	4,412,447	90	6,183,927	4,306,674	1,644,360		
12 CUSTOMER SERVICES	30,950,842	24,404,201	1,093,771	0	2,447,687	877,059	638,646		
13 CUSTOMER METERS	29,135,832	19,047,972	1,439,054	0	2,404,928	2,894,235	811,480		
14 CUSTOMER W/H & CON BURN	(3,303,165)	(1,679,896)	(81,654)	(8)	(218,775)	(386,415)	(333,395)		
15 CUSTOMER DEPOSITS	(181,091)	(3,385)	328	(0)	(60,482)	(77,602)	(15,046)		
16 CUST RETURNED CHECK	(31,790)	(23,445)	(1,478)	(0)	(2,405)	(2,204)	(727)		
17 CUST GUARD/C & CUST SERV	(8,569,405)	(4,590,230)	(92,345)	(33)	(522,368)	(1,033,507)	(805,474)		
18 CUSTOMER SALES COMP	491,048	320,143	30,142	(0)	27,123	30,594	21,883		
19 CUST ADVERTISING COMP	13,346,315	7,167,696	134,864	52	807,963	1,608,323	1,243,666		
20 CUSTOMER METER READING	1,612,895	1,267,800	175,334	0	96,824	26,368	6,843		
21 CUST RECORDS & COLLECT	16,215,850	12,412,074	1,714,432	79	1,203,402	369,625	76,504		
22 TOTAL COMPANY	478,651,282	323,428,755	10,830,018	2,726	31,946,429	46,870,369	22,321,850		
23 TOTAL PRODUCTION	336,914,239	230,848,852	6,046,507	2,349	22,259,198	35,408,497	15,643,522		
24 TOTAL DELIVERY SERVICE	139,737,043	92,580,903	4,783,511	377	9,687,231	11,461,872	6,678,328		
25 PRODUCTION COMPONENT \$/Therm	\$0.9261	\$0.9320	\$0.9456	\$0.8610	\$0.9549	\$0.9165	\$0.8947		
26 DELIVERY COMPONENT \$/Therm	\$0.2832	\$0.3736	\$0.7479	\$0.1382	\$0.3842	\$0.2116	\$0.1513		
27 CUSTOMER COMPONENT \$/MO/CUST	\$23.37	\$21.90	\$11.02	\$0.63	\$30.89	\$76.64	\$221.25		
28 TOTAL THRUPUT THERMS	493,498,312	247,763,289	6,396,166	2,728	25,211,296	54,160,592	44,136,406		
29 TOTAL SALES THERMS	365,949,046	247,703,740	6,394,258	2,728	23,311,210	38,636,479	17,483,686		
30 TOTAL ANNUAL CUSTOMERS	3,395,936	2,666,494	400,515	144	200,206	56,195	7,432		

Bay State Gas Company
D.T.E. 05-27
Attachment AG-22-44(1)
Page 315 of 322

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

Bay State Gas Company
D.T.E. 05-27
Attachment AG-22-44(1)
Page 316 of 322

PRESENT RATE OF RETURN SUMMARY SCHEDULE - CO		HIGH WINTER LRG HI ANNUAL G-43 & T-43	LOW WINTER LOW ANNUAL G-50 & T-50	LOW WINTER MED ANNUAL G-51 & T-51	LOW WINTER HIGH ANNUAL G-52 & T-52	LOW WINTER LRG HI ANNUAL G-53 & T-53	
RATE OF RETURN		2.64%	1.98%	3.49%	7.06%	8.30%	
REVENUES REQUIRED							
1	CAPACITY COMPONENTS						
2	DEMAND PRODUCTION	1,546,764	835,316	2,854,787	2,851,681	5,248,336	
3	PRODUCTION LPG	712,049	420,248	1,244,583	522,134	319,512	
4	PRODUCTION LNG	8,256	3,011	8,546	2,686	3,490	
5	PROD DEMAND GAS COSTS	41,204	14,803	43,406	14,525	19,220	
6	DEMAND DISTRIBUTION	682,590	402,434	1,192,632	504,922	296,802	
7	PRESSURE SUPPORT	33,896	14,469	60,173	78,871	162,921	
8	DISTRIBUTION OTHER	800,809	400,599	1,560,030	2,250,876	4,765,903	
9	COMMODITY COMPONENTS						
10	GAS COSTS	3,265,725	3,584,694	10,832,796	5,314,949	2,488,624	
11	CUSTOMER COMPONENTS						
12	CUSTOMER SERVICES	90,800	1,355,867	1,564,233	844,817	580,754	
13	CUSTOMER METERS	23,634	413,278	282,604	275,611	134,463	
14	CUSTOMER WH & CON BURN	62,178	683,819	1,112,081	466,703	223,403	
15	CUSTOMER DEPOSITS	(1,172)	(38,614)	(137,233)	(122,810)	(220,020)	
16	CUST RETURNED CHECK	(123)	(446)	(11,199)	(10,324)	(1,781)	
17	CUST GUARDIC & CUST SERV	(168,514)	(73,924)	(289,526)	(335,743)	(667,722)	
18	CUSTOMER SALES COMP	4,493	5,390	11,719	12,709	26,863	
19	CUST ADVERTISING COMP	255,877	112,362	442,574	523,736	1,048,970	
20	CUSTOMER METER READING	825	19,783	11,709	3,702	3,507	
21	CUST RECORDS & COLLECT	7,977	234,662	132,133	31,568	33,194	
22	TOTAL COMPANY	478,651,282	5,775,878	15,241,815	9,011,447	8,317,714	
23	TOTAL PRODUCTION	3,977,774	4,004,942	12,077,379	5,837,063	2,808,137	
24	TOTAL DELIVERY SERVICE	925,505	1,770,936	3,164,436	3,174,354	5,508,578	
25	PRODUCTION COMPONENT \$/therm	\$0.8975	\$0.9008	\$0.8803	\$0.8757	\$0.8903	
26	DELIVERY COMPONENT \$/therm	\$0.0978	\$0.3377	\$0.1481	\$0.1245	\$0.1016	
27	CUSTOMER COMPONENT \$/MO/CUST	\$501.66	\$33.97	\$73.75	\$282.64	\$726.85	
28	TOTAL THRUPUT THERMS	9,468,031	5,243,886	21,369,383	25,505,268	64,222,227	
29	TOTAL SALES THERMS	4,431,946	4,446,204	13,716,907	6,865,891	3,153,997	
30	TOTAL ANNUAL CUSTOMERS	181	39,908	21,073	2,969	799	

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

Attachment AG-22-44

Bay State Gas Company
D.T.E. 05-27
Attachment AG-22-44(1)
Page 317 of 322

PRESENT RATE OF RETURN SUMMARY SCHEDULE - FUNCTION FORMAT									
	TOTAL COMPANY	RESIDENTIAL HEATING R-3 & R-4	RESIDENTIAL NON-HEATING R-1 & R-2	OUTDOOR LIGHTING	HIGH WINTER LOW ANNUAL G-40 & T-40	HIGH WINTER MED ANNUAL G-41 & T-41	HIGH WINTER HIGH ANNUAL G-42 & T-42		
RATE OF RETURN	5.77%	7.00%	-11.86%	11.24%	5.22%	6.82%	5.50%		
\$/THERM									
CAPACITY COMPONENTS									
1 DEMAND PRODUCTION	\$0.3250	\$0.3016	\$0.1510	\$0.1673	\$0.3490	\$0.3627	\$0.4446		
2 PRODUCTION LPG	\$0.1600	\$0.1636	\$0.0930	\$0.0823	\$0.1987	\$0.1775	\$0.1566		
3 PRODUCTION LNG	\$0.0021	\$0.0022	\$0.0004	\$0.0000	\$0.0026	\$0.0025	\$0.0021		
4 PROD DEMAND GAS COSTS	\$0.0115	\$0.0120	\$0.0015	\$0.0000	\$0.0147	\$0.0136	\$0.0112		
5	\$0.1495	\$0.1494	\$0.0811	\$0.0623	\$0.1811	\$0.1614	\$0.1433		
6									
7 DEMAND DISTRIBUTION									
8 PRESSURE SUPPORT	\$0.0054	\$0.0043	\$0.0015	\$0.0032	\$0.0050	\$0.0062	\$0.0103		
9 DISTRIBUTION OTHER	\$0.1506	\$0.1337	\$0.0565	\$0.1019	\$0.1453	\$0.1790	\$0.2777		
10									
11 COMMODITY COMPONENTS	\$0.7661	\$0.7683	\$0.8528	\$0.7987	\$0.7562	\$0.7369	\$0.7381		
12 GAS COSTS	\$0.7661	\$0.7683	\$0.8528	\$0.7987	\$0.7562	\$0.7369	\$0.7381		
13									
14 CUSTOMER COMPONENTS	\$0.2169	\$0.2357	\$0.0901	\$0.0332	\$0.2653	\$0.1115	\$0.0841		
15 CUSTOMER SERVICES	\$0.0838	\$0.0988	\$0.1711	\$0.0000	\$0.1050	\$0.0227	\$0.0365		
16 CUSTOMER METERS	\$0.0796	\$0.0769	\$0.2251	\$0.0000	\$0.1032	\$0.0749	\$0.0464		
17 CUSTOMER WH & CON BURN	-\$0.0090	-\$0.0068	-\$0.0128	-\$0.0029	-\$0.0094	-\$0.0100	-\$0.0191		
18 CUSTOMER DEPOSITS	-\$0.0005	\$0.0000	\$0.0001	\$0.0000	-\$0.0026	-\$0.0020	-\$0.0009		
19 CUST RETURNED CHECK	-\$0.0001	-\$0.0001	-\$0.0002	\$0.0000	-\$0.0001	-\$0.0001	\$0.0000		
20 CUST GUARDIC & CUST SERV	-\$0.0234	-\$0.0185	-\$0.0144	-\$0.0120	-\$0.0224	-\$0.0267	-\$0.0461		
21 CUSTOMER SALES COMP	\$0.0013	\$0.0013	\$0.0047	\$0.0000	\$0.0012	\$0.0008	\$0.0013		
22 CUST ADVERTISING COMP	\$0.0366	\$0.0289	\$0.0211	\$0.0191	\$0.0347	\$0.0416	\$0.0711		
23 CUSTOMER METER READING	\$0.0044	\$0.0051	\$0.0274	\$0.0000	\$0.0042	\$0.0007	\$0.0004		
24 CUST RECORDS & COLLECT	\$0.0443	\$0.0501	\$0.2681	\$0.0290	\$0.0516	\$0.0096	\$0.0044		
25 TOTAL COMPANY	\$1.3080	\$1.3057	\$1.6937	\$0.9992	\$1.3704	\$1.2131	\$1.2767		
26									
27 TOTAL PRODUCTION	\$0.9261	\$0.9320	\$0.9456	\$0.8610	\$0.9549	\$0.9165	\$0.8947		
28									
29 TOTAL DELIVERY SERVICE	\$0.3818	\$0.3738	\$0.7481	\$0.1382	\$0.4156	\$0.2967	\$0.3820		
30									

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

Bay State Gas Company
D.T.E. 05-27
Attachment AG-22-44(1)
Page 318 of 322

PRESENT RATE OF RETURN SUMMARY SCHEDULE - FUJ		HIGH WINTER LRG HI ANNUAL G-43 & T-43	LOW WINTER LOW ANNUAL G-50 & T-50	LOW WINTER MED ANNUAL G-51 & T-51	LOW WINTER HIGH ANNUAL G-52 & T-52	LOW WINTER LRG HI ANNUAL G-53 & T-53
RATE OF RETURN		2.64%	1.68%	3.49%	7.09%	8.30%
\$/THERM						
1	CAPACITY COMPONENTS					
2	DEMAND PRODUCTION	\$0.3490	\$0.1879	\$0.2081	\$0.4278	\$1.6640
3	PRODUCTION LPG	\$0.1607	\$0.0845	\$0.0907	\$0.0783	\$0.1013
4	PRODUCTION LNG	\$0.0019	\$0.0007	\$0.0006	\$0.0004	\$0.0011
5	PROD DEMAND GAS COSTS	\$0.0093	\$0.0033	\$0.0032	\$0.0022	\$0.0091
6		\$0.1495	\$0.0805	\$0.0869	\$0.0757	\$0.0941
7	DEMAND DISTRIBUTION					
8	PRESSURE SUPPORT	\$0.0076	\$0.0033	\$0.0044	\$0.0118	\$0.0617
9	DISTRIBUTION OTHER	\$0.1807	\$0.0801	\$0.1130	\$0.3376	\$1.5111
10	COMMODITY COMPONENTS					
11	GAS COSTS	\$0.7369	\$0.8062	\$0.7896	\$0.7973	\$0.7890
12		\$0.7366	\$0.8062	\$0.7896	\$0.7973	\$0.7890
13	CUSTOMER COMPONENTS					
14	CUSTOMER SERVICES	\$0.0205	\$0.3049	\$0.1133	\$0.1267	\$0.1841
15	CUSTOMER METERS	\$0.0053	\$0.0930	\$0.0206	\$0.0413	\$0.0426
16	CUSTOMER W/H & CON BURN	\$0.0118	\$0.1538	\$0.0811	\$0.0700	\$0.0708
17	CUSTOMER DEPOSITS	-\$0.0190	-\$0.0087	-\$0.0100	-\$0.0184	-\$0.0688
18	CUST RETURNED CHECK	-\$0.0003	-\$0.0001	-\$0.0008	-\$0.0015	-\$0.0006
19	CUST GUARDIC & CUST SERV	\$0.0000	-\$0.0001	\$0.0000	\$0.0000	\$0.0000
20	CUSTOMER SALES COMP	-\$0.0380	-\$0.0166	-\$0.0211	-\$0.0504	-\$0.2117
21	CUST ADVERTISING COMP	\$0.0012	\$0.0009	\$0.0009	\$0.0019	\$0.0086
22	CUSTOMER METER READING	\$0.0577	\$0.0253	\$0.0323	\$0.0786	\$0.3328
23	CUST RECORDS & COLLECT	\$0.0002	\$0.0044	\$0.0009	\$0.0006	\$0.0011
24		\$0.0018	\$0.0528	\$0.0096	\$0.0047	\$0.0105
25	TOTAL COMPANY	\$1.1063	\$1.2891	\$1.1110	\$1.3519	\$2.6372
26						
27	TOTAL PRODUCTION	\$0.8975	\$0.9008	\$0.8803	\$0.8757	\$0.8903
28						
29	TOTAL DELIVERY SERVICE	\$0.2088	\$0.3953	\$0.2307	\$0.4762	\$1.7469
30						

CLAIMED RATE OF RETURN SUMMARY SCHEDULE - COMPONENT FORMAT									
TOTAL COMPANY		RESIDENTIAL HEATING R-3 & R-4	RESIDENTIAL NON-HEATING R-1 & R-2	OUTDOOR LIGHTING	HIGH WINTER LOW ANNUAL G-40 & T-40	HIGH WINTER MED ANNUAL G-41 & T-41	HIGH WINTER HIGH ANNUAL G-42 & T-42		
RATE OF RETURN		9.05%	9.05%	9.05%	9.05%	9.05%	9.05%		
REVENUES REQUIRED									
1	CAPACITY COMPONENTS	129,041,282	78,896,612	1,767,515	426	9,029,164	15,052,820	9,036,373	
2	DEMAND PRODUCTION	58,979,089	40,761,423	613,537	170	4,664,961	6,903,918	2,766,937	
3	PRODUCTION LPG	817,975	572,786	4,426	0	70,265	101,932	39,896	
4	PRODUCTION LNG	4,564,030	3,188,954	24,639	0	391,197	567,498	222,118	
5	PROD DEMAND GAS COSTS	53,607,084	36,999,684	584,473	170	4,223,499	6,234,489	2,504,923	
6	DEMAND DISTRIBUTION		1,144,247	23,229	8	130,575	258,187	201,277	
7	PRESSURE SUPPORT	2,141,158		1,130,748	247	4,213,928	7,890,714	6,068,190	
8	DISTRIBUTION OTHER	67,921,034	36,990,942						
9	COMMODITY COMPONENTS	280,398,057	190,344,423	5,470,210	2,179	17,633,062	28,561,721	12,905,638	
10	GAS COSTS	280,398,057	190,344,423	5,470,210	2,179	17,633,062	28,561,721	12,905,638	
11	CUSTOMER COMPONENTS	90,026,968	62,142,312	9,701,579	87	6,934,335	4,654,141	1,941,230	
12	CUSTOMER SERVICES	36,699,627	26,513,810	4,224,340	0	2,860,558	959,992	740,747	
13	CUSTOMER METERS	33,227,303	20,237,391	3,300,219	0	2,701,408	3,097,631	906,409	
14	CUSTOMER WH & CON BURN	(2,630,658)	(1,405,639)	(28,540)	(10)	(160,426)	(317,213)	(247,262)	
15	CUSTOMER DEPOSITS	(374,498)	(4,866)	(202)	(0)	(124,015)	(111,991)	(29,502)	
16	CUST RETURNED CHECK	(31,823)	(23,459)	(1,490)	(0)	(2,408)	(2,205)	(728)	
17	CUST GUARDIC & CUST SERV	(8,575,414)	(4,582,750)	(93,033)	(33)	(522,956)	(1,034,049)	(806,121)	
18	CUSTOMER SALES COMP	503,729	324,805	35,022	(0)	27,871	31,090	22,454	
19	CUST ADVERTISING COMP	13,555,043	7,253,036	151,917	52	828,164	1,629,632	1,270,130	
20	CUSTOMER METER READING	1,665,809	1,286,698	204,480	0	99,559	26,806	7,025	
21	CUSTOMER METER READING	16,587,551	12,543,285	1,908,867	79	1,228,581	374,447	78,115	
22	CUST RECORDS & COLLECT	500,066,007	331,383,347	16,939,304	2,692	33,596,561	48,268,681	23,883,250	
	TOTAL COMPANY	500,066,007							
		500,066,007							
23	TOTAL PRODUCTION	339,377,146	231,105,846	6,083,748	2,349	22,318,023	35,455,639	15,672,575	
24	TOTAL DELIVERY SERVICE	160,688,861	100,277,501	10,855,556	343	11,278,538	12,803,042	8,210,675	
25	PRODUCTION COMPONENT \$/THERM	\$0.9274	\$0.9330	\$0.9514	\$0.8610	\$0.9574	\$0.9177	\$0.8964	
26	DISTRIBUTION COMPONENT \$/THERM	\$0.3256	\$0.4047	\$1.0972	\$0.1257	\$0.4474	\$0.2364	\$0.1860	
27	CUSTOMER COMPONENT \$/MO/CUST	\$26.69	\$23.30	\$24.22	\$0.61	\$34.64	\$82.82	\$261.20	
28	TOTAL THRUPTUT THERMS	493,498,312	247,763,289	6,396,166	2,728	25,211,236	54,160,592	44,135,406	
29	TOTAL SALES THERMS	385,949,048	247,703,740	6,394,258	2,728	23,311,210	38,036,479	17,463,668	
30	TOTAL ANNUAL CUSTOMERS	3,395,936	2,686,494	400,515	144	200,206	56,195	7,432	

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

Bay State Gas Company
D.T.E. 05-27
Attachment AG-22-44(1)
Page 320 of 322

CLAIMED RATE OF RETURN SUMMARY SCHEDULE - CON		HIGH WINTER LRG HI ANNUAL G-43 & T-43	LOW WINTER LOW ANNUAL G-50 & T-50	LOW WINTER MED ANNUAL G-51 & T-51	LOW WINTER HIGH ANNUAL G-52 & T-52	LOW WINTER LRG HI ANNUAL G-53 & T-53
RATE OF RETURN		9.05%	9.05%	9.05%	9.05%	9.05%
REVENUES REQUIRED						
1	CAPACITY COMPONENTS					
2	DEMAND PRODUCTION	2,026,637	1,069,935	3,559,286	3,136,450	5,486,164
3	PRODUCTION LPG	724,115	425,451	1,255,290	523,237	320,048
4	PRODUCTION LNG	52,121	3,468	9,516	2,787	3,539
5	PROD DEMAND GAS COSTS	662,633	19,305	52,979	15,515	19,704
			402,678	1,192,795	504,935	296,805
6	DEMAND DISTRIBUTION					
7	PRESSURE SUPPORT	42,136	18,497	72,386	83,867	166,749
8	DISTRIBUTION OTHER	1,260,286	625,988	2,231,610	2,528,345	4,979,360
9	COMMODITY COMPONENTS					
10	GAS COSTS	3,265,939	3,586,671	10,834,280	5,315,090	2,488,645
		3,265,939	3,586,671	10,834,280	5,315,090	2,488,645
11	CUSTOMER COMPONENTS					
12	CUSTOMER SERVICES	144,674	1,699,471	1,860,903	918,530	609,698
13	CUSTOMER METERS	31,484	571,988	360,043	298,157	138,508
14	CUSTOMER W/H & CON BURN	64,375	866,987	1,329,404	495,292	228,486
15	CUSTOMER DEPOSITS	(51,769)	(22,726)	(86,934)	(103,041)	(204,870)
16	CUST RETURNED CHECK	(10,314)	(30,130)	(47,547)	(14,143)	(1,988)
17	CUST GUARD/C & CUST SERV	(124)	(441)	(630)	(235)	(104)
18	CUSTOMER SALES COMP	(168,755)	(74,061)	(289,907)	(335,892)	(667,835)
19	CUST ADVERTISING COMP	4,710	5,663	12,204	12,890	26,969
20	CUSTOMER METER READING	265,894	117,318	457,458	629,815	1,053,627
21	CUST RECORDS & COLLECT	888	20,886	12,205	3,756	3,527
		500,066,007	244,285	136,308	31,931	33,349
22	TOTAL COMPANY	500,066,007	6,356,277	10,274,168	9,370,069	8,564,507
23	TOTAL PRODUCTION	3,990,054	4,012,321	12,089,570	5,838,327	2,808,664
24	TOTAL DELIVERY SERVICE	1,447,086	2,343,956	4,184,599	3,531,742	5,755,813
25	PRODUCTION COMPONENT \$/THERM	\$0.9003	\$0.9024	\$0.8812	\$0.8759	\$0.8905
26	DISTRIBUTION COMPONENT \$/THERM	\$0.1528	\$0.4470	\$0.1958	\$0.1385	\$0.1082
27	CUSTOMER COMPONENT \$/MOICUST	\$766.31	\$42.58	\$89.24	\$307.30	\$763.08
28	TOTAL THRUPUT THERMS	9,468,031	5,243,986	21,369,383	25,505,268	54,222,227
29	TOTAL SALES THERMS	4,431,946	4,446,204	13,716,907	6,665,891	3,153,997
30	TOTAL ANNUAL CUSTOMERS	181	39,908	21,073	2,989	799

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

CLAIMED RATE OF RETURN SUMMARY SCHEDULE - FUNCTION FORMAT									
TOTAL COMPANY		RESIDENTIAL HEATING R-3 & R-4	RESIDENTIAL NON-HEATING R-1 & R-2	OUTDOOR LIGHTING	HIGH WINTER LOW ANNUAL G-40 & T-40	HIGH WINTER MED ANNUAL G-41 & T-41	HIGH WINTER HIGH ANNUAL G-42 & T-42		
RATE OF RETURN		9.05%	9.05%	9.05%	9.05%	9.05%	9.05%		
\$/THERM									
1	CAPACITY COMPONENTS								
2	DEMAND PRODUCTION	\$0.3528	\$0.3185	\$0.2764	\$0.1560	\$0.3873	\$0.3586	\$0.5166	
3	PRODUCTION LPG	\$0.1612	\$0.1646	\$0.0860	\$0.0823	\$0.2010	\$0.1787	\$0.1583	
4	PRODUCTION LNG	\$0.0022	\$0.0023	\$0.0007	\$0.0000	\$0.0030	\$0.0026	\$0.0023	
5	PROD DEMAND GAS COSTS	\$0.0124	\$0.0129	\$0.0036	\$0.0000	\$0.0168	\$0.0147	\$0.0127	
6		\$0.1495	\$0.1494	\$0.0914	\$0.0823	\$0.1812	\$0.1614	\$0.1433	
7	DEMAND DISTRIBUTION								
8	PRESSURE SUPPORT	\$0.0059	\$0.0046	\$0.0036	\$0.0030	\$0.0056	\$0.0067	\$0.0115	
9	DISTRIBUTION OTHER	\$0.1856	\$0.1493	\$0.1798	\$0.0907	\$0.1808	\$0.2042	\$0.3471	
10									
11	COMMODITY COMPONENTS								
12	GAS COSTS	\$0.7662	\$0.7684	\$0.8655	\$0.7987	\$0.7564	\$0.7390	\$0.7382	
13		\$0.7662	\$0.7684	\$0.8655	\$0.7987	\$0.7564	\$0.7390	\$0.7382	
14	CUSTOMER COMPONENTS								
15	CUSTOMER SERVICES	\$0.2476	\$0.2509	\$1.5172	\$0.0920	\$0.2975	\$0.1205	\$0.1110	
16	CUSTOMER METERS	\$0.1003	\$0.1070	\$0.6606	\$0.0000	\$0.1227	\$0.0248	\$0.0424	
17	CUSTOMER WH & CON BURN	\$0.0908	\$0.0917	\$0.5161	\$0.0000	\$0.1150	\$0.0802	\$0.0518	
18	CUSTOMER DEPOSITS	-\$0.0072	-\$0.0057	-\$0.0046	-\$0.0037	-\$0.0069	-\$0.0082	-\$0.0141	
19	CUST RETURNED CHECK	-\$0.0010	\$0.0000	\$0.0000	\$0.0000	-\$0.0053	-\$0.0029	-\$0.0017	
20	CUST GUARDIC & CUST SERV	-\$0.0001	-\$0.0001	-\$0.0002	\$0.0000	-\$0.0001	-\$0.0001	\$0.0000	
21	CUSTOMER SALES COMP	-\$0.0234	-\$0.0185	-\$0.0146	-\$0.0120	-\$0.0224	-\$0.0268	-\$0.0461	
22	CUST ADVERTISING COMP	\$0.0014	\$0.0013	\$0.0055	\$0.0000	\$0.0012	\$0.0008	\$0.0013	
23	CUSTOMER METER READING	\$0.0370	\$0.0293	\$0.0238	\$0.0189	\$0.0354	\$0.0422	\$0.0726	
24	CUST RECORDS & COLLECT	\$0.0046	\$0.0052	\$0.0320	\$0.0000	\$0.0043	\$0.0007	\$0.0004	
25	TOTAL COMPANY	\$0.0453	\$0.0506	\$0.2985	\$0.0288	\$0.0527	\$0.0097	\$0.0045	
26		\$1.3865	\$1.3378	\$2.6491	\$0.9887	\$1.4412	\$1.2490	\$1.3660	
27	TOTAL PRODUCTION								
28		\$0.9274	\$0.9330	\$0.9514	\$0.8610	\$0.9574	\$0.9177	\$0.8964	
29	TOTAL DELIVERY SERVICE								
30		\$0.4391	\$0.4048	\$1.8977	\$0.1257	\$0.4838	\$0.3314	\$0.4696	

BAY STATE GAS COMPANY
GAS COST OF SERVICE STUDY
12 MONTHS ENDED DECEMBER 31, 2004

Bay State Gas Company
D.T.E. 05-27
Attachment AG-22-44(1)
Page 322 of 322

CLAIMED RATE OF RETURN SUMMARY SCHEDULE - FULL		HIGH WINTER LRG HI ANNUAL G-43 & T-43	LOW WINTER LOW ANNUAL G-50 & T-50	LOW WINTER MED ANNUAL G-51 & T-51	LOW WINTER HIGH ANNUAL G-52 & T-52	LOW WINTER LRG HI ANNUAL G-53 & T-53
RATE OF RETURN		9.05%	9.05%	9.05%	9.05%	9.05%
\$/THERM						
1	CAPACITY COMPONENTS					
2	DEMAND PRODUCTION	\$0.4573	\$0.2406	\$0.2594	\$0.4705	\$1.7331
3	PRODUCTION LPG	\$0.1634	\$0.0957	\$0.0915	\$0.0785	\$0.1015
4	PRODUCTION LNG	\$0.0118	\$0.0008	\$0.0007	\$0.0004	\$0.0011
5	PROD DEMAND GAS COSTS	\$0.1495	\$0.0043	\$0.0039	\$0.0023	\$0.0062
6			\$0.0906	\$0.0869	\$0.0757	\$0.0941
7	DEMAND DISTRIBUTION					
8	PRESSURE SUPPORT	\$0.0095	\$0.0042	\$0.0053	\$0.0126	\$0.0529
9	DISTRIBUTION OTHER	\$0.2844	\$0.1408	\$0.1627	\$0.3794	\$1.6787
10						
11	COMMODITY COMPONENTS					
12	GAS COSTS	\$0.7369	\$0.8067	\$0.7897	\$0.7874	\$0.7860
13		\$0.7369	\$0.8067	\$0.7897	\$0.7974	\$0.7890
14	CUSTOMER COMPONENTS					
15	CUSTOMER SERVICES	\$0.0326	\$0.3822	\$0.1371	\$0.1378	\$0.1933
16	CUSTOMER METERS	\$0.0071	\$0.1296	\$0.0262	\$0.0447	\$0.0439
17	CUSTOMER W/H & CON BURN	\$0.0145	\$0.1949	\$0.0869	\$0.0743	\$0.0724
18	CUSTOMER DEPOSITS	-\$0.0117	-\$0.0051	-\$0.0065	-\$0.0155	-\$0.0650
19	CUST RETURNED CHECK	-\$0.0023	-\$0.0068	-\$0.0035	-\$0.0021	-\$0.0008
20	CUST GUARD/C & CUST SERV	\$0.0000	-\$0.0001	\$0.0000	\$0.0000	\$0.0000
21	CUSTOMER SALES COMP	-\$0.0381	-\$0.0167	-\$0.0211	-\$0.0504	-\$0.2117
22	CUST ADVERTISING COMP	\$0.0011	\$0.0013	\$0.0009	\$0.0019	\$0.0088
23	CUSTOM METER READING	\$0.0600	\$0.0264	\$0.0333	\$0.0795	\$0.3341
24	CUST RECORDS & COLLECT	\$0.0002	\$0.0047	\$0.0009	\$0.0006	\$0.0011
25	TOTAL COMPANY	\$1.2266	\$0.0549	\$0.0099	\$0.0048	\$0.0106
26			\$1.4296	\$1.1863	\$1.4057	\$2.7154
27	TOTAL PRODUCTION	\$0.9003	\$0.9024	\$0.8812	\$0.8759	\$0.8905
28						
29	TOTAL DELIVERY SERVICE	\$0.3265	\$0.5272	\$0.3050	\$0.5296	\$1.8249
30						

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

RESPONSE OF BAY STATE GAS COMPANY TO THE
ELEVENTH SET OF INFORMATION REQUESTS FROM THE D.T.E.
D. T. E. 05-27

Date: July 14, 2005

Responsible: Earl M. Robinson, Consultant

DTE-11-6 Refer to Exh. BSG/EMR-1, at 11, line 18. Why, in the example cited here, would the three different retirement ages be divided by two?

Response: Mr. Robinson's testimony, filed as Exh BSG/EMR-1, at 11, line 18, should be revised to read:

A brief example (with a property group that has three units/three equal life groups of like property) will demonstrate the difference between the two procedures. The example incorporates the assumption that unit No. 1 (or equal life group of property) will retire after one year, unit No. 2 (or equal life group) will retire after two years, and Unit No. 3 (or equal life group) will retire after three years. Accordingly, the average life of all three (groups) is ~~three (3)~~ two (2) years ~~(1+2+3÷2)~~ $(1+2+3/3)$. Under the Broad Group Procedure, the average useful life and resulting depreciation rate is calculated based upon the ~~three (3)~~ two (2) year average life. The resulting annual depreciation rates would be ~~33.33~~ fifty (50) percent in every year.

The proof of the above statements is as follows:

Beg of Year	Invest. Amount	Depr. Rate -%	Depr. Amt	Retirement Amount	End of Year Depr. Reserve
1	\$900	50%	\$450	\$300	\$150
2	600	50%	300	300	150
3	300	50%	150	300	0
4	0				

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

RESPONSE OF BAY STATE GAS COMPANY TO THE
EIGHTEENTH SET OF INFORMATION REQUESTS FROM THE D.T.E.
D. T. E. 18-03

Date: July 14, 2005

Responsible: Earl M. Robinson

DTE-18-03 Refer to Exh. BSG/EMR-2, at 4-287. Explain why the Company anticipates a “modest level of negative net salvage” for Account 305 (Structures and Improvements).

Response: Account 305 is related to Production Structures and Improvements. Utility operating structures are routinely located at sites specifically linked to the Company’s gas operating system and therefore the sites are not readily interchangeable with other buildings located in the neighborhood. As such, when the Company retires and/or needs to upgrade/replace the existing facility, the facility needs to be removed or altered before another facility can use the site. Also, given that gas production sites routinely have had a long history of use it is not uncommon that environment concerns and/or conditions are often applicable to the properties. Such circumstances routinely require additional investigation and cost to the Company.

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

RESPONSE OF BAY STATE GAS COMPANY TO THE
EIGHTEENTH SET OF INFORMATION REQUESTS FROM THE D.T.E.
D. T. E. 18-04

Date: July 14, 2005

Responsible: Earl M. Robinson, Consultant

DTE-18-04 Refer to Exh. BSG/EMR-2, at 4-290. Please explain why the Company has included land rights (Account 374, Rights of Way) in the depreciation study as a depreciable asset.

Response: The Company's investment in Account 374-Rights of Way have been depreciated for many years. The investments are related to acquired rights of way costs that need to be recovered over there useful service live.

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

RESPONSE OF BAY STATE GAS COMPANY TO THE
EIGHTEENTH SET OF INFORMATION REQUESTS FROM THE D.T.E.
D. T. E. 18-05

Date: July 14, 2005

Responsible: Earl M. Robinson, Consultant

DTE-18-05 Refer to Exh. BSG/EMR-2, at 4-306. For Account 390 (Structures and Improvements), please explain how a life span of 45 years was developed.

Response: The implicit average service life and resulting annual depreciation rate for location type properties such as structures are routinely based upon the use of the life span method. The forty-five (45) year life span is a typical period of time use as the applicable life span (along with the interim retirement rate) as a basis for depreciation of general office type structures and improvements. The life span period is a general life assumption and is based upon the experience that structures (especially those used for office operations) are routinely changed out and/or are significantly upgraded at periods equal to (and in various circumstances) intervals of less than forty-five years. Accordingly, the forty-five year life span is considered the maximum period of time that such building will provide useful service.

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

RESPONSE OF BAY STATE GAS COMPANY TO THE
EIGHTEENTH SET OF INFORMATION REQUESTS FROM THE D.T.E.
D. T. E. 18-06

Date: July 14, 2005

Responsible: Earl M. Robinson, Consultant

DTE-18-06 Refer to Exh. BSG/EMR-2, at 4-307. Please provide the Company's historical salvage data for Account 391.1 (Office Furniture and Equipment) for the years 1980 through 2003.

Response: The Company does not maintain its salvage or cost of removal records for Account 391 by sub-account. The information is only available for the total Account 391.

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

RESPONSE OF BAY STATE GAS COMPANY TO THE
EIGHTEENTH SET OF INFORMATION REQUESTS FROM THE D.T.E.
D. T. E. 18-07

Date: July 14, 2005

Responsible: Earl M. Robinson, Consultant

DTE-18-07 Refer to Exh. BSG/EMR-2, at 4-307. Please explain why the Company is achieving a less than one percent positive salvage value for retired plant in Account 391.1 (Office Furniture and Equipment).

Response: At the end of its useful life Office Furniture and Equipment has little value. Especially, with regard to Office Equipment, the property is routinely obsolete and no one has a desire for such equipment. In fact, in such circumstances, the Company may actually incur cost to dispose of the property via a waste management company.

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

RESPONSE OF BAY STATE GAS COMPANY TO THE
EIGHTEENTH SET OF INFORMATION REQUESTS FROM THE D.T.E.
D. T. E. 18-08

Date: July 14, 2005

Responsible: Earl M. Robinson, Consultant

DTE-18-08 Refer to Exh. BSG/EMR-2, at 4-308. For Account 391.2 (Computer and IT Equipment), please explain why is there a zero percent expected future net salvage value.

Response: It is widely acknowledged that Company and IT Equipment rapidly becomes obsolete, and therefore has minimal or no value at the end of its useful life. In various cases companies actually incur costs to dispose of the obsolete equipment.